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READINGS *for College English*

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edited by

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Bushman and Mathews: *Readings*

MADE IN U.S.A. E. P. 2

To Teacher and Student

The readings in this book have been selected to help the college composition student read, think, and write better. The book is not an anthology of literary masterpieces; it is a collection of good —often superlative—writing intended to serve the specific needs of a college composition course. The materials in the book are of two kinds: models which can be more or less directly imitated, and selections which give practice in college-level reading and simultaneously offer significant facts and ideas. Many of the pieces in the book serve both these functions. The text of every selection has been carefully checked; the only adaptation made is the use of double quotation marks for single in two selections by English writers.

The 96 selections have a wide range of interest and illustrate many techniques, styles, and purposes. Persons of widely different backgrounds present their experiences and their thoughts—from the farm boy to the Supreme Court Justice, from the woman educator to the satirist of designing women, from the naive cub pilot to the statesman-philosopher. All sizable sections of the United States are represented. With a few exceptions, the idiom is of our time; the eighteenth and nineteenth century selections are included for the exceptional importance of their content and their contrast with today's way of saying things. The range in style is from the plain and simple, well within the student's powers, to the formal and highly sophisticated. The range in subject matter makes possible an appeal to the student of almost any background and intellectual inclination. The unusual number and variety of personal-experience selections should provide especially useful models for the young writer; they give him an opportunity to begin where he easily can—with what he has seen and experienced. The essays on education and on aspects of the American past and present (in Sections 2 and 4) are intended as a balanced and vigorous introduction to mature democratic values.

The selections are grouped in five sequences which represent a practical compromise between type and content. This arrangement is highly teachable, but is not iron-bound: the accompanying apparatus, the table of contents and especially the elaborate index, permit complete flexibility. The questions asked about the selections do not conform to a fixed pattern; they are such as any good teacher would ask. They are the inevitable kind: they deal with points of subject matter when there is value in checking the student's comprehension, and, through the course of the book, with all fundamental matters of composition and usage. Vocabulary questions call, not for the mechanical use of the dictionary, but for a study of words and phrases in their contexts.

The content and intention of the five sections of the book are as follows:

Section 1 contains material based upon direct personal experience or observation. Here are models to stimulate the presentation of first-hand knowledge and ideas. These examples will show the student that he can score a success without "working up" a subject and, since most of the examples are in large part chronological, without being troubled by organization. The absence of the problems of subject matter and organization leaves the beginner extra time and energy to concentrate on diction, sentence structure, and paragraphing—big enough difficulties for him at the outset. The selections give him examples of skill in these elements of writing.

Section 2, largely because of the ideas and information it presents, is important to the student as a student. Here are essays on the objectives of higher education and advice on college-level reading and writing. The last four selections are extracts from textbooks; the questions accompanying them are designed to improve the student's reading of his textbooks.

Section 3 consists largely of selections illustrating relatively simple expository techniques and reasoning processes. Most of the essays are on nature and science, but along with them are some pieces of historical and biographical interest and a few dealing with contemporary problems. The selections are chiefly notable for their skilled presentation of facts. A number of them—notably those by Huxley—are good examples of scientific reasoning. A few, especially the last three, are argumentative in aim. All of them imply, in addition to personal observation, ✓some research in the library or in the field.

Section 4 contains mature analytical and critical or interpretive essays. The first three and the fifth present speculation on or by some Americans who have greatly influenced our way of life. This series is interrupted by the contrasting "Napoleon" of Emerson. The three following essays generalize about democracy and America, and at least one of them gives advice for our times. Two succeeding essays discuss regional traits, and several thereafter theorize about life in general—what it is like and how it ought to be lived. The rest of the section consists of articles on books, drama, and music. In the questions on these essays, the student is directed in the formation of standards of judgment. The last two essays in the section go beyond the individual work of art and give the student exercise in a broader application of critical judgment. The whole section can be studied as criticism, to disabuse the student, if necessary, of the notion that literary and art criticism are radically different from other kinds of criticism.

Section 5 presents simple descriptive and narrative sketches, personal essays, and short stories, written for entertainment and to be read in the same spirit. These selections can teach a great many direct and indirect lessons in style and technique; a number of them are sufficiently simple to serve as models.

The Table of Contents lists the selections contained in the five sections. By and large the order is that of increasing difficulty, both in the book as a whole and in the individual sections, but this scheme is not followed rigidly. For example, the relatively difficult Huxley selections are placed with other essays of scientific interest rather than at the end of Section 3, and Emerson's masterful analysis of Napoleon is placed with accounts of other significant men rather than at the end of Section 4. Teachers will not find it hard to gauge, at a glance, the difficulty of a given selection.

Discussion questions and writing assignments accompany many of the selections. A good number are left without questions for two reasons. Students may become so enslaved by questions that they read only for the answers, and teachers will often prefer to plan analyses to fit the needs of individual classes. For the same reasons many of the selections are accompanied by only one or two questions on salient features. The techniques of reading to be developed by the student and the parallel techniques that should be employed in writing are elaborated and schematized in "To the Student," the second part of this introduction. There the student is advised that the questions following a selection are never exhaustive; that more questions about words, sentences, paragraphs, style, etc., can be asked; and that he must be able to answer additional questions. In many instances the questions call for the criticism of an author's ideas or of his manner of presenting them, but the editors themselves have consistently refrained from making critical comments on the selections. The student will learn more if he, with the teacher's guidance, forms his own opinions.

The writing assignments accompanying a large number of the selections call for the common varieties of composition and for some less common, but no less valuable for the student. These assignments are not spaced arithmetically. They are more frequent in the sections of the book containing the simpler types of writing (1 and 3)—the types more likely to be used as direct models. Still other writing assignments can, of course, be extracted from the selections. Specific topics offered in the writing assignments are merely suggestive; the student is encouraged to follow his interests and use his growing knowledge and experience.

The Index is of a type not found, so far as the editors know, in any comparable book of selections. It provides not only a ready reference to author and title of each selection, but also to the major rhetorical principles about which discussion questions are given. The teacher who wishes to refer the student to significant examples of organization, of parallel structure, of climax, of the use of figurative language and the like, can locate examples by consulting the Index, which will refer him to selections accompanied by questions about these details. Various types of writing, such as the travel account, the process, the mechanism, the argument by statistics, can also be located in the Index, whether or not they are accompanied by discussion questions. Students can make full use of the book by learning to use the Index as a guide to examples.

To the Reader—As a Composition Student

Almost all college courses give training in careful reading, but few of them devote time to rules or patterns for reading as a skill or as an aid to writing. The discussion questions in this book present "laboratory" work in the techniques of good reading; the patterns established are for the most part transferable to all types of reading. Questions about main ideas, centralizing purposes, principles of organization, paragraphing, sentence construction, and the use of words are certainly to be asked about all reading. Some selections are left without questions so that you can apply patterns set up in the following pages and in the questions about other selections. Some selections have a single question, or a very few questions, about major points. Other questions, possibly quite as important, you are expected to ask yourself to make sure that you derive full value from the selections. You may, for example, ask yourself to analyze the organization and the sentence structure of every selection you read. You should certainly learn whatever new words are necessary to a grasp of the author's meaning.

Nearly all questions about a selection as a problem or exercise in reading imply questions which teach something about writing. A question about an author's choice of words, for example, implies that you, in your writing, should observe and improve your use of words. A question about paragraph structure—topic sentence and development—implies a question you should ask about your own paragraphing in every paper you write. The following table parallels the chief tricks or skills in reading and the questions they imply for you as a writer. The table, in a word, is a summary pattern for both reading and writing, not exhaustive of all that goes into the finest expository writing, and certainly lean on the side of descriptive and narrative techniques.[1] It should be of practical value as a guide to better reading and better writing.

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[1] The patterns in the table are enriched by the questions asked about specific selections. Grammar and basic correctness in the fundamentals of writing are neglected in the table for the reason that the selections seldom deviate from correctness. But observation of the grammar and mechanics of the selections will aid anyone to whom these aspects of writing offer difficulty.

Reading Skill	***Writing Skill***
Study question or suggestion	*Test question for writers*
THE WHOLE COMPOSITION	THE WHOLE COMPOSITION
What is the main idea or central purpose?	Do I have a clearly expressed and clearly developed main idea?
How is the topic limited?	Have I limited my topic so that I can develop it fully?
What are the author's sources of information—personal observation, laboratory research, reading, independent reasoning?	Does my theme rest upon a solid basis of information and is my reasoning logical? Have I observed closely and read widely and carefully on my topic?
Into what major ideas or Roman-numeral points is the selection divided?	Have I a clear outline, and a logical one, of what I have to say?
What is the plan of organization? How is it made clear to the reader? How are the parts of the essay linked together?	What is my plan of organization? Are the different parts clearly separated, yet skilfully linked together?
What minor ideas and details develop the larger ideas?	Do I develop my ideas by examples, analysis, cause and effect, etc.?
Are key words used to guide the reader and to emphasize major ideas?	Do I make full use of key words, repeating them skilfully?
What is the author's attitude toward his subject and how does he make it clear?	Just what is my attitude? Is it consistent throughout and clear to the reader?
What audience does the writer have in mind? How does his understanding of his audience affect his presentation of his material?	Do I have a definite audience in mind? Is it my composition class? the teacher? or who?
THE PARAGRAPH AND THE SENTENCE	THE PARAGRAPH AND THE SENTENCE
Are the topic sentences easy to pick out? Is their position in the paragraph varied?	Do I make the topic ideas of my paragraphs clear and stick to them in my paragraphs? Do I vary the location of the topic sentences?

Study question or suggestion	*Test question for writers*
THE PARAGRAPH AND THE SENTENCE (*Continued*)	THE PARAGRAPH AND THE SENTENCE (*Continued*)
Are the paragraphs long, fully developing their topics? or are they short, chain-link paragraphs typical of much periodical literature?	Are my paragraphs fully developed, or too short and jerky?
How are the paragraphs developed? by definition, examples, comparison, cause and effect, etc.?	Have I used all appropriate means of developing my topic ideas?
How are individual paragraphs organized?	How are my paragraphs organized? by chronology, cause and effect, or ________?
Are the paragraphs linked together by continuing or contrasting ideas or by transition sentences or words?	Do my paragraphs join together naturally? Do I show how their ideas follow and support each other?
Are the sentences long and involved or intricate? or short and direct? or midway between? Is there variety of length? If so, what is the effect of the variety?	Are my sentences too long and involved to be readable? So short and simple as to read like a primer? Are they varied in length?
What proportion of simple, compound, and complex sentences occurs? Is there variety in this respect?	Do I use the different types of sentences in varied fashion?
Are there frequent deviations from the normal sentence order of subject, predicate, object?	Are my sentences monotonous because the normal order is constant?
What rhetorical devices occur—parallel structure, antithesis, periodic structure, repetition, etc.?	Do I avail myself of effective rhetorical devices? Do I use these devices naturally?
Are the various devices of sentence structure so used as to give variety and emphasis?	Do my sentences seem varied and emphatic, or monotonous and dull?
WORDS	WORDS
What is the meaning of words *in their contexts*? Do you need aid from a dictionary to determine the meaning?	Do I use my words correctly and with a full knowledge of their meaning and usage?

Study question or suggestion	*Test question for writers*
WORDS (*Continued*)	WORDS (*Continued*)
Are words used chiefly for their denotations or their connotations?	Do I use words too matter-of-factly, or too emotionally?
Is the diction in general concrete or abstract? specific or general?	Am I concrete and specific wherever it is possible to be so?
What particularly vivid or emphatic words are used?	Have I made reasonable use of vivid words to make my writing more emphatic?
Is the diction simple or learned? ornate or plain? direct or oblique?	Do I overdo plainness or fanciness, or abuse big words?
What is the level of diction—formal or informal? How much colloquial language or slang is used? How many polysyllabic words appear and what is their proportion to the rest of the words?	Is my writing either too formal or too informal? Am I afraid of slang or too much addicted to it? Do I achieve a good, simple colloquial flavor where it is desirable?
Are figures of speech common? If so, are they decorative or explanatory? Are they intended to aid in making ideas clear as well as to express feeling?	Do I avail myself of figures of speech? Do I use them in a logical and unstrained way?
Does the diction—the level, the manner of use, etc.—fit the subject matter?	Does my choice of words fit the subject and my attitude toward it?
EVALUATION OR CRITICISM	SELF-CRITICISM
What is the writer's intention? How important is this intention? That is, how significant is his work?	What is my intention? How important is this intention? Do I bring out the significance of what I am writing about?
Does the writer carry out his intention successfully? a. If he is explaining, does he make his subject clear? b. If he is arguing, does he convince you? Is his logic sound; are his facts ample and reliable?	Do I seem sincere and convincing, and at the same time clear and interesting?

Study question or suggestion	*Test question for writers*
EVALUATION OR CRITICISM (*Continued*)	SELF-CRITICISM (*Continued*)
c. If he tells a story, does he interest you and enlighten you? Do his characters and setting seem convincing?	
Is the work original? Does it present new facts, new ideas, or new interpretation?	Is my work original in content or interpretation or feeling?
Has the author anticipated the probable questions?	Have I foreseen all important queries and objections?
Is the work authoritative? What are the author's qualifications? What are the data of publication: date, publisher, etc.?	Are my facts sound? Have I mastered my material and thought it out carefully?
Does the author's style, or manner, fit his subject? How would you describe his style: judicial, humorous, light, personal, easy, hard, etc.? Is the style itself interesting? Does the author's style fit his audience and the occasion?	Do I write like myself at my best, and in keeping with my subject matter and the audience I have in mind?

The suggested patterns are not to be applied mechanically. Indeed, they are not applied mechanically in the discussion questions accompanying the selections in this book. Ask yourself, if no discussion questions accompany a selection, or only a few, what questions are necessary to your comprehension and appreciation. Ask questions which will force you to pay attention to points in which your writing is weak—to paragraph development or to sentence structure, perhaps. Go beyond the pattern tabulated above and ask questions about grammar, punctuation, or mechanics. For example, set yourself the task of diagraming two or three striking sentences, to parsing a sentence, to explaining the use of written or Arabic numerals or of capital letters, or italics. Insist on explaining to yourself the reason for every punctuation mark on a given page. But ask these questions after you have accomplished the major task of enjoying, understanding, and evaluating.

Do not hesitate to accept the writers as stimuli and as models. Imitating them will teach you many tricks of expression.

Speed in Reading

The preceding section gives advice about the primary aim of reading—comprehension. Speed is secondary in importance, but especially desirable for you as a college student. You will be expected to skim some books and magazines for facts and ideas important to you; some materials such as collateral reading you must do in a quantity which demands speed. The skills necessary to speedy reading are, with a few exceptions, also the skills necessary to comprehension: the ready perception of main ideas, purpose, and tone; of the structure of the whole and the parts; and of the meanings of sentences and words. After mastering these skills you can undertake a few mechanical exercises to increase your speed, not only without sacrifice of comprehension, but with an actual gain. Research has shown that students can increase their speed in reading immensely through their own almost unaided efforts, and that faster reading often involves better comprehension.

Such details as lighting, posture, and freedom from distraction are important to your practice sessions. Your mood and your surroundings should be conducive to concentration. With these conditions satisfactory, you can begin your improvement in the main skill in speedy reading: the ability to grasp whole phrases or short sentences at a single fixation of the eyes. The eye transmits only those words it takes in at the pauses or fixations made as it courses along a line; the swift reader takes in several words or a whole line at a single pause and for that reason is a swift reader. Adequate eye-span can be developed by reading materials in which you have marked off with bars, throughout a whole selection, groups of words which force the expansion of your normal eye-span. By reading a pre-marked essay with the will to take in all the words between each pair of marks, you will soon cultivate the habit of reading by sizable groups of words, often by groups set off by punctuation. You may find articles printed in relatively narrow columns more convenient than a pre-marked text, provided the lines are a bit beyond your accustomed eye-span. In all reading practice you should guard especially against lip-reading (the formation of individual words by the lips and other organs of speech) and against the habit of backing up to catch items you may have missed.

The following devices have proved effective in increasing speed.

Read an essay at your normal speed, and calculate your rate per minute by dividing the number of words by the number of minutes required for the reading. Then re-read the essay at as swift a pace as you can. Practice this with several pieces of the length of an average article. Second, practice the "flying start." Read, at your normal speed, the first few paragraphs of an essay, enough to give you a clear notion of the drift of the whole; return to the beginning, read these already familiar paragraphs as rapidly as you can, then carry on through the whole essay with as little diminution of speed as possible. Be sure to check your comprehension of all selections used for practice.

Practice for speed is best limited to light reading for information or for pleasure. It will pay dividends of greater enjoyment and, since it develops all the skills of reading, clearer understanding. The following selections in this book are suggested for speed practice; they are listed in order of difficulty:

HOMER CROY, *The Rainmakers* (p. 7)—1721 words
OLIVER LA FARGE, *Racing an Eight-Oared Shell* (p. 37)—1078 words
DONALD CULROSS PEATTIE, *The Santa Fe Trail* (p. 263)—3228 words
SAM SHULSKY, *America's Traffic Headaches* (p. 344)—2929 words
ARTHUR M. SCHLESINGER, JR., *The Legacy of Andrew Jackson* (p. 367)—2384 words
PEARL BUCK, *Literature and Life* (p. 472)—3431 words

The number of words in each selection is given at the end. You had best begin with number 1 on the list to calculate your normal reading rate, and the rate at which you can re-read. Then you should try for a steady improvement as you read the remaining selections—practicing by re-reading and by using the flying start on two or three each, trying for an increase of eye-span in all of them. Keep a record of your improvement, and do not be satisfied until your improvement is substantial.

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SECTION 1 · *Personal Experience and Observation*

HAMLIN GARLAND · *Getting the Doctor*

One night as I lay buried in deep sleep close to the garret eaves I heard my mother call me—and something in her voice pierced me, roused me. A poignant note of alarm was in it.

"Hamlin," she called, "get up—at once. You must go for the doctor. Your father is very sick. *Hurry!*"

I sprang from my bed, dizzy with sleep, yet understanding her appeal. "I hear you, I'm coming," I called down to her as I started to dress.

"Call Hattie. I need her, too."

The rain was pattering on the roof, and as I dressed I had a disturbing vision of the long cold ride which lay before me. I hoped the case was not so bad as mother thought. With limbs still numb and weak I stumbled down the stairs to the sitting room where faint light shone.

Mother met me with white, strained face. "Your father is suffering terribly. Go for the doctor at once."

I could hear the sufferer groan even as I moved about the kitchen, putting on my coat and lighting the lantern. It was about one o'clock of the morning, and the wind was cold as I picked my way through the mud to the barn. The thought of the long miles to town made me shiver, but as the son of a soldier I could not falter in my duty.

In their warm stalls the horses were resting in dreamful doze. Dan and Dick, the big plow team, stood near the door. Jule and Dolly came next. Wild Frank, a fleet but treacherous Morgan, stood fifth and for a moment I considered taking him. He was strong and of wonderful staying powers but so savage and unreliable that I dared not risk an accident. I passed on to bay Kittie whose eyes seemed to inquire, "What is the matter?"

Flinging the blanket over her and smoothing it carefully, I tossed the light saddle to her back and cinched it tight, so tight that she grunted. "I can't take any chances of a spill," I explained to her, and she accepted the bit willingly. She was always ready for action and fully dependable.

— From *A Son of the Middle Border,* copyright 1914, 1917 by P. F. Collier & Son, 1917, 1923 by Hamlin Garland and used with the permission of The Macmillan Company.

Blowing out my lantern I hung it on a peg, led Kit from her stall out into the night, and swung to the saddle. She made off with a spattering rush through the yard out into the road. It was dark as pitch but I was fully awake now. The dash of the rain in my face had cleared my brain, but I trusted to the keener senses of the mare to find the road which showed only in the strips of water which filled the wagon tracks.

We made way slowly for a few minutes until my eyes expanded to take in the faint lines of light along the lane. The road at last became a river of ink running between faint gray banks of sward, and my heart rose in confidence. I took on dignity. I was a courier riding through the night to save a city, a messenger on whose courage and skill thousands of lives depended.

"Get out o' this!" I shouted to Kit, and she leaped away like a wolf, at a tearing gallop.

She knew her rider. We had herded the cattle many days on the prairie, and in races with the wild colts I had tested her speed. Snorting with vigor at every leap she seemed to say, "My heart is brave, my limbs are strong. Call on me."

Out of the darkness John Martin's Carlo barked. A half-mile had passed. Old Marsh's fox hound clamored next. Two miles were gone. From here the road ran diagonally across the prairie, a velvet-black band on the dim sod. The ground was firmer but there were swales full of water. Through these Kittie dashed with unhesitating confidence, the water flying from her drumming hooves. Once she went to her knees and almost unseated me, but I regained my saddle and shouted, "Go on, Kit."

The fourth mile was in the mud, but the fifth brought us to the village turnpike and the mare was as glad of it as I. Her breath was labored now. She snorted no more in exultation and confident strength. She began to wonder—to doubt, and I, who knew her ways as well as I knew those of a human being, realized that she was beginning to flag. The mud had begun to tell on her.

It hurt me to urge her on, but the memory of my mother's agonized face and the sound of my father's groan of pain steeled my heart. I set lash to her side and so kept her to her highest speed.

At last a gleam of light! Someone in the village was awake. I passed another lighted window. Then the green and red lamps of the drug store cheered me with their promise of aid, for the doctor lived next door. There too a dim ray shone.

Slipping from my weary horse I tied her to the rail and hurried up the walk toward the doctor's bell. I remembered just where the knob rested. Twice I pulled sharply, strongly, putting into it some part of the anxiety and impatience I felt. I could hear its imperative jingle as it died away in the silent house.

At last the door opened and the doctor, a big blonde handsome man in a long night gown, confronted me with impassive face. "What is it, my boy?" he asked kindly.

As I told him he looked down at my water-soaked form and wild-eyed countenance with gentle patience. Then he peered out over my head into the dismal night. He was a man of resolution but he hesitated for a moment. "Your father is suffering sharply, is he?"

"Yes, sir. I could hear him groan.—Please hurry."

He mused a moment. "He is a soldier. He would not complain of a little thing—I will come."

Turning in relief, I ran down the walk and climbed upon my shivering mare. She wheeled sharply, eager to be off on her homeward way. Her spirit was not broken, but she was content to take a slower pace. She seemed to know that our errand was accomplished and that the warm shelter of the stall was to be her reward.

Holding her down to a slow trot I turned often to see if I could detect the lights of the doctor's buggy, which was a familiar sight on our road. I had heard that he kept one of his teams harnessed ready for calls like this, and I confidently expected him to overtake me. "It's a terrible night to go out, but he said he would come," I repeated as I rode.

At last the lights of a carriage, crazily rocking, came into view and pulling Kit to a walk I twisted in my saddle, ready to shout with admiration of the speed of his team. "He's driving the 'Clay-Banks,'" I called in great excitement.

The Clay-Banks were famous throughout the county as the doctor's swiftest and wildest team, a span of bronchos whose savage spirits no journey could entirely subdue, a team he did not spare, a team that scorned petting and pity, bony, sinewy, big-headed. They never walked and had little care of mud or snow.

They came rushing now with splashing feet and foaming, half-open jaws, the big doctor, calm, iron-handed, masterful, sitting in the swaying top of his light buggy, his feet against the dash board, keeping his furious span in hand as easily as if they were a pair of Shetland ponies. The nigh horse was running, the off horse pacing, and the splatter of their feet, the slash of the wheels and the roaring of their breathing, made my boyish heart leap. I could hardly repress a yell of delight.[1]

As I drew aside to let him pass the doctor called out with mellow cheer, "Take your time, boy, take your time!"

Before I could even think of an answer, he was gone and I was alone with Kit and the night.

My anxiety vanished with him. I had done all that could humanly be done, I had fetched the doctor. Whatever happened I was guiltless. I knew also that in a few minutes a sweet relief would come to my tortured mother, and with full faith and loving confidence in the man of science, I jogged homeward, wet to the bone but triumphant.

Discussion

1. Comment on the way the extract begins. Is the introductory information sufficient for the understanding of what follows?
2. A. Did the author have any problem of organization? Is his order of presentation the only one possible in a narrative? Explain your answer.
   B. Is there a climax in the narrative? Where does it occur? When the boy reaches the doctor? When the doctor passes the boy on the road?
3. Is the ending effective? Does it round off and complete the episode?
4. Why does the author characterize the doctor? Would the narrative have been weaker if the doctor had not been given a definite character? Why?
5. Point out instances of boyish impressionableness and imagination.
6. Point out the visual and auditory details which describe the road and the countryside at night.
7. Which of the following adjectives would you use in describing the author's choice of words: homely, formal, racy, informal, vivid, drab, elegant, plain, ornate? Is the diction especially suited to the subject matter?
8. Formulate a rule for the punctuation of dialogue, using the examples in this selection as your data.

Writing

Write a theme presenting an incident which is interesting in itself and at the same time reveals a significant aspect of your early life. The following may suggest a topic: A fool's errand, A job that was too big for me, When I went to the rescue, When I was allowed to help at a grown-up job.

HOMER CROY · *The Rainmakers*

One day my father said, "Get ready and we'll go to town and see the rainmaker."

No work! Maybe a candy mouse. Maybe some lickorish (as we called it). There were always wonderful things to be had in town.

It was not long before we were in the hack and jogging along the dusty road; there, on each side of us, was the suffering, gasping, dying corn.

It did not seem queer to be going to see the rainmaker; at this time a great many people indeed believed in rainmakers. Of course *some* scoffed; they were usually the kind who stood outside a church at a revival and told funny stories. At least, that's the way we thought of them. The papers were filled with accounts of the wonders that rainmakers accomplished and lists of "precipitation." I did not know at first that this was just plain rain; it was disappointing that such a fine and impressive word could mean anything so simple as rain. . . .

It was like county fair. Teams were jogging toward town, great clouds of dust arose. The women-folks sat with veils over their mouths to keep from sucking it down. But we boys sat proudly with our faces bared, taking the dust as it came. Sometimes a team would try to pass. I would want Pa to race but he never would; too conservative. Then I would wish I had a father like Newt Kennedy, who would race anything on the road.

— From *Corn Country* by Homer Croy. Reprinted by permission of the Publishers, Duell, Sloan and Pearce, Inc. Copyright, 1947, by Homer Croy. First published in *Harper's Magazine*, September, 1946.

And then suddenly there it was—the water tower—the first herald of town. How high it stood above the trees, filled with tons and tons of water! What would happen if the tower fell? I almost wished it would. What excitement! The vitrified pavement sent up waves of heat. "It's hotter here than in the country," my father said. He always said that and believed it, too. The rest of us would murmur, "It don't seem as hot to us."

No flags across the street, no bunting, no platforms in the courthouse yard for speakers, no toy balloons, no squawkers to shoot out and tickle a girl. But otherwise it did seem like a street fair. Boys on every street corner selling lemonade. Parasols which could be rented for weak ladies.

Everybody studied the sky. At the post office a daily weather bulletin was posted in a little gray-metal frame. The bulletin was filled with strange, weird lines called "isotherms." Only Professor Hawkins could understand them. Pa would put on his spectacles and shake his head. "It don't look good." What we wanted to know was if there was any possibility of rain. The rainmaker might creep around and see for himself and thus know how long to hang on.

The Corn Belt had many rainmakers; everybody knew their names and believed in them or didn't, just as people believe in certain racehorses or don't. Some called them "fakes," and some believed in them as implicitly as they did in their preachers. Some rainmakers made a flat charge of five hundred dollars, let the rain fall where it might; some charged half-a-cent an acre; some charged by the number of acres of cultivated land. Some charged by the number of miles from the place where they made the rain attempt. But there was one good thing; all rainmakers worked on the basis of "no rain, no pay." The distressed farmer—seeing his crops perishing before his eyes—wanted the rainmaker to try. If the rain came, there would be enough corn to pay him. If there was no rain, he wouldn't have to pay him.

Soon the whole town—yes! the whole county—was on its way to the depot, people on foot, the farmers walking in the street, city people mincing along on the sidewalk. And me running ahead to explore, then coming back to tell Pa and Ma and Phebe. Then darting away again, like a dog off a leash. . . .

As we drew near the depot, the crowd became thicker; thousands upon thousands, it seemed to me. The railroad had set the rainmaker's car on a siding and there it was—the mysterious, wonderful boxcar that was going to save our crops. I was a little skeptical, but I wanted deeply and earnestly to believe. A rope had been stretched so the crowd would not get too near the car, for it was a secret how the man made it rain. Little by little I worked my way near and at last caught a glimpse of the wizard, for that was exactly how I thought of him, and so, for that matter, did most of the people. I was disappointed, for I expected to see an exceedingly tall man, with long hair and maybe a cape. Instead he was of medium height, and had stooped shoulders.

In a moment the disappointment was over; I believed in him; yes, that little stooped man could perform miracles.

The railroad had converted a whole boxcar to his use; windows had been cut. One end was for sleeping and eating, my peeking revealed, and the other was for the chemicals and gases that were going to save our corn. And in the roof, over this end, there was a hole. The little stooped man climbed the iron ladder to the roof of the car where he studied the sky—we held our breath.

Down again he went and our hearts, too,—what if the sky was not right? But he sent out word that the sky was right. Now there was, indeed, a great stirring inside the mysterious car and in a few minutes a grayish gas began coming out the stovepipe hole in the roof. In no time the gas hit our noses—the most evil-smelling stuff we had ever encountered. But if it took that to make it rain, why all well and good; we could stand it. The theory, as most of us knew by this time, was that this gas went up and drops of moisture coagulated around the particles and down came the rain. It seemed simple and logical to us; and, for that matter, it seemed simple and logical to countless county officials, and to state ones, too.

Up went the gas and up went our eyes and up went our hopes. How long would it take? Stories had come back from other towns and other states; sometimes it took only two or three hours, sometimes it took two or three days.

People visited; neighborhood news was exchanged, corn news. Always corn news. From all parts of the county it was the same—the corn was "burning up," yellow sickly stalks, cutworms taking them—the devils that flourish best in corn-killing weather. People joked a little, but not much; the situation was too desperate for fun. But a man did come among us with a keg of umbrellas. That made us laugh a little, but even with all this some people bought, mostly city people who were delicate and couldn't stand to get wet. It made us smile, as we saw the city people picking through the umbrellas, for it always seemed to us city people were queer and did unaccountable things. They could look down on us because we were poor and because we didn't have good clothes, but—thank God!—we didn't buy umbrellas when there wasn't a cloud in the sky.

A long wait. Children played, men fed their horses out of the back ends of hacks, the city people went home to dinner, the gas continued to go up, still smelling like hell but—so we said—worth it.

Suddenly there was great excitement; someone shouted, "There's a cloud!" And sure enough there was one, about as big as a horse-blanket. And now a great many jokes, for we knew this was the start. It was going to rain. We gazed upon the rainmaker as if he were a god. This wonderful, this splendid man was going to save us!

As suddenly as it had appeared, the horse-blanket disappeared. A silence, for this was a calamity, not something to joke about.

The afternoon wore on. People came and went; the evil-smelling gas continued to rise. But not a cloud. And down our hearts went. Smart-alecks said, "I tol' you so. He can't make it rain. He's a fake." But the believers stuck by him. I did. My faith never wavered.

But chores are chores and cows must be milked, so when evening drew upon us, Pa and Ma and Phebe and I went to the hack, where the horses had had their dinner. Pa threw the cobs out and brushed the grains onto the ground. Soon we were jogging home. I turned and there, standing out over everything like a friendly sentinel, was the water tower. Finally it bobbed out of sight.

When we came to the Croy Farm, Pa's eyes read everything, as they always did, to see if all was right—if the gates were closed, if a horse might be on the barbed wire, if the windmill had raised water for the cattle, the thousand and one things those eyes of his could see. "We're late tonight. Homer, I guess you'll have to milk an extra cow." I groaned to myself. Work. Always work. When I got big I'd go to the city and lead a soft life. But I'd have more sense than to buy an umbrella when there wasn't a cloud in the sky.

We put the lanterns away, and after the chores were done, sat on the porch and looked out across the dying corn and our hearts were heavy. Pa spoke of taxes. There would be trouble, this year, paying them. Movers would be going by—people who had lost their farms; tramps would be begging for food. If you didn't give it to them, they'd open your gates and let the cattle out; they might even set fire to a haystack.

Pa studied the sky. He was the weather prophet of the family. "Well, I dunno." He came back and sat down in the rocking chair. "I . . . just dunno," he repeated. "But it looks a little more on the favorable side."

Bedtime came. The heat filled the rooms like smoke in the smokehouse. And it was almost as suffocating. Corn-killing weather. We'd be lucky to get nubbins.

Pa took another look. "I'm gettin' to be more hopeful."

The windmill went into gear. "Do you hear that!" said Pa.

Suddenly there was a *sput* on the porch steps—then another and another. The dog came in and curled up.

Our spirits leaped and so did the spirits of the farm. Soft, heart-filling moos came from the cows, the mules began to kick up their heels, the sows grunted contentedly—sweet, lovely music.

We went to bed, the rain spattering on the roof; the rain barrel began to roar.

When we got up the next morning, a thrilling sight greeted our eyes. Water was everywhere, the hens were huddled under the shed, clucking softly; the dog had darted in and out, and there on the porch were his footprints. But that was all right; everything in the world was all right. The drought was broken. And we knew why it had been broken. City people might scoff, but *we* knew. And we were thankful to God for the fine, wonderful man who had come among us!

MARK TWAIN • *Shaken Confidence*

One matchless summer's day I was bowling down the bend above Island 66, brimful of self-conceit and carrying my nose as high as a giraffe's, when Mr. Bixby said:

"I am going below awhile. I suppose you know the next crossing?"

This was almost an affront. It was about the plainest and simplest crossing in the whole river. One couldn't come to any harm, whether he ran it right or not; and as for depth, there never had been any bottom there. I knew all this, perfectly well.

"Know how to *run* it? Why, I can run it with my eyes shut."

"How much water is there in it?"

"Well, that is an odd question. I couldn't get bottom there with a church steeple."

"You think so, do you?"

The very tone of the question shook my confidence. That was what Mr. Bixby was expecting. He left, without saying anything more. I began to imagine all sorts of things. Mr. Bixby, unknown to me, of course, sent somebody down to the forecastle with some mysterious instructions to the leadsman, another messenger was sent to whisper among the officers, and then Mr. Bixby went into hiding behind a smoke-stack where he could observe results. Presently the captain stepped out on the hurricane-deck; next the chief mate appeared; then a clerk. Every moment or two a straggler was added to my audience; and before I got to the head of the island I had fifteen or twenty people assembled down there under my nose. I began to wonder what the trouble was. As I started across, the captain glanced aloft at me and said, with a sham uneasiness in his voice:

"Where is Mr. Bixby?"

"Gone below, sir."

But that did the business for me. My imagination began to construct dangers out of nothing, and they multiplied faster than I could keep the run of them. All at once I imagined I saw shoal

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— From *Life on the Mississippi*, 1883. The name "Mark Twain" used by permission of Harper and Brothers.

water ahead! The wave of coward agony that surged through me then came near dislocating every joint in me. All my confidence in that crossing vanished. I seized the bell-rope; dropped it, ashamed; seized it again; dropped it once more; clutched it tremblingly once again, and pulled it so feebly that I could hardly hear the stroke myself. Captain and mate sang out instantly, and both together:

"Starboard lead there! and quick about it!"

This was another shock. I began to climb the wheel like a squirrel; but I would hardly get the boat started to port before I would see new dangers on that side, and away I would spin to the other; only to find perils accumulating to starboard, and be crazy to get to port again. Then came the leadsman's sepulchral cry:

"D-e-e-p four!"

Deep four in a bottomless crossing! The terror of it took my breath away.

"M-a-r-k three! M-a-r-k three! Quarter-less-three! Half twain!"

This was frightful! I seized the bell-ropes and stopped the engines.

"Quarter twain! Quarter twain! *Mark* twain!"

I was helpless. I did not know what in the world to do. I was quaking from head to foot, and I could have hung my hat on my eyes, they stuck out so far.

"Quarter-*less*-twain! Nine-and-a-*half!*"

We were *drawing* nine! My hands were in a nerveless flutter. I could not ring a bell intelligibly with them. I flew to the speaking-tube and shouted to the engineer:

"Oh, Ben, if you love me, *back* her! Quick, Ben! Oh, back the immortal *soul* out of her!"

I heard the door close gently. I looked around, and there stood Mr. Bixby, smiling a bland, sweet smile. Then the audience on the hurricane-deck sent up a thundergust of humiliating laughter. I saw it all, now, and I felt meaner than the meanest man in human history. I laid in the lead, set the boat in her marks, came ahead on the engines, and said:

"It was a fine trick to play on an orphan, *wasn't* it? I suppose I'll never hear the last of how I was ass enough to heave the lead at the head of 66."

"Well, no, you won't, maybe. In fact I hope you won't; for

I want you to learn something by that experience. Didn't you *know* there was no bottom in that crossing?"

"Yes, sir, I did."

"Very well, then. You shouldn't have allowed me or anybody else to shake your confidence in that knowledge. Try to remember that. And another thing: when you get into a dangerous place, don't turn coward. That isn't going to help matters any."

It was a good enough lesson, but pretty hardly learned. Yet about the hardest part of it was that for months I so often had to hear a phrase which I had conceived a particular distaste for. It was, "Oh, Ben, if you love me, back her!"

Discussion

1. What did Mr. Bixby teach his cub pilot by means of this experience?
2. Point out details which make the cub's deflation complete.
3. Point out and define the technical terms of the riverman. Why did the author feel it unnecessary to define them in his text?
4. What words and phrases give the selection a distinctively colloquial flavor? How does the colloquial style enrich this account of an experience on the river?

Writing

Write an account of an experience in adapting yourself to a new job or other new activity such as a sport, dramatics, or military life.

MARK TWAIN · *Youthful Heroics*

One trip a pretty girl of sixteen spent her time in our pilot-house with her uncle and aunt, every day and all day long. I fell in love with her. So did Mr. Thornburg's cub, Tom G. Tom and I had been bosom friends until this time; but now a coolness began to arise. I told the girl a good many of my river adventures, and

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— From *Life on the Mississippi,* 1883. The name "Mark Twain" used by permission of Harper and Brothers.

made myself out a good deal of a hero; Tom tried to make himself appear to be a hero, too, and succeeded to some extent, but then he always had a way of embroidering. However, virtue is its own reward, so I was a barely perceptible trifle ahead in the contest. About this time something happened which promised handsomely for me: the pilots decided to sound the crossing at the head of 21. This would occur about nine or ten o'clock at night, when the passengers would be still up; it would be Mr. Thornburg's watch, therefore my chief would have to do the sounding. We had a perfect love of a sounding-boat—long, trim, graceful, and as fleet as a greyhound; her thwarts were cushioned; she carried twelve oarsmen; one of the mates was always sent in her to transmit orders to her crew, for ours was a steamer where no end of "style" was put on.

We tied up at the shore above 21, and got ready. It was a foul night, and the river was so wide, there, that a landsman's uneducated eyes could discern no opposite shore through such a gloom. The passengers were alert and interested; everything was satisfactory. As I hurried through the engine-room, picturesquely gotten up in storm toggery, I met Tom, and could not forbear delivering myself of a mean speech:

"Ain't you glad *you* don't have to go out sounding?"

Tom was passing on, but he quickly turned, and said:

"Now just for that, you can go and get the sounding-pole yourself. I was going after it, but I'd see you in Halifax, now, before I'd do it."

"Who wants you to get it? I don't. It's in the sounding-boat."

"It ain't, either. It's been new-painted; and it's been up on the ladies' cabin-guards two days, drying."

I flew back, and shortly arrived among the crowd of watching and wondering ladies just in time to hear the command:

"Give way, men!"

I looked over, and there was the gallant sounding-boat booming away, the unprincipled Tom presiding at the tiller, and my chief sitting by him with the sounding-pole which I had been sent on a fool's errand to fetch. Then that young girl said to me:

"Oh, how awful to have to go out in that little boat on such a night! Do you think there is any danger?"

I would rather have been stabbed. I went off, full of venom, to help in the pilot-house. By and by the boat's lantern disappeared, and after an interval a wee spark glimmered upon the face of the water a mile away. Mr. Thornburg blew the whistle in acknowledgement, backed the steamer out, and made for it. We flew along for a while, then slackened steam and went cautiously gliding toward the spark. Presently Mr. Thornburg exclaimed:

"Hello, the buoy lantern's out!"

He stopped the engines. A moment or two later he said:

"Why, there it is again!"

So he came ahead on the engines once more, and rang for the leads. Gradually the water shoaled up, and then began to deepen again! Mr. Thornburg muttered:

"Well, I don't understand this. I believe that buoy has drifted off the reef. Seems to be a little too far to the left. No matter, it is safest to run over it, anyhow."

So, in that solid world of darkness we went creeping down on the light. Just as our bows were in the act of plowing over it, Mr. Thornburg seized the bell-ropes, rang a startling peal, and exclaimed:

"My soul, it's the sounding-boat!"

A sudden chorus of wild alarms burst out far below—a pause—and then a sound of grinding and crashing followed. Mr. Thornburg exclaimed:

"There! The paddle-wheel has ground the sounding-boat to lucifer matches! Run! See who is killed!"

I was on the main-deck in the twinkling of an eye. My chief and the third mate and nearly all the men were safe. They had discovered their danger when it was too late to pull out of the way; then, when the great guards over-shadowed them a moment later, they were prepared and knew what to do; at my chief's order they sprang at the right instant, seized the guard, and were hauled aboard. The next moment the sounding-yawl swept aft to the wheel and was struck and splintered to atoms. Two of the men and the cub Tom were missing—a fact which spread like wildfire over the boat. The passengers came flocking to the forward gangway, ladies and all, anxious-eyed, white-faced, and talked in awed voices of the dreadful thing. And often and again I heard them say, "Poor fellows! poor boy, poor boy!"

By this time the boat's yawl was manned and away, to search for the missing. Now a faint call was heard, off to the left. The yawl had disappeared in the other direction. Half the people rushed to one side to encourage the swimmer with their shouts; the other half rushed the other way to shriek to the yawl to turn about. By the callings the swimmer was approaching, but some said the sound showed failing strength. The crowd massed themselves against the boiler-deck railings, leaning over and staring into the gloom; and every faint and fainter cry wrung from them such words as "Ah, poor fellow, poor fellow! is there *no* way to save him?"

But still the cries held out, and drew nearer, and presently the voice said pluckily:

"I can make it! Stand by with a rope!"

What a rousing cheer they gave him! The chief mate took his stand in the glare of a torch-basket, a coil of rope in his hand, and his men grouped about him. The next moment the swimmer's face appeared in the circle of light, and in another one the owner of it was hauled aboard, limp and drenched, while cheer on cheer went up. It was that devil Tom.

The yawl crew searched everywhere, but found no sign of the two men. They probably failed to catch the guard, tumbled back, and were struck by the wheel and killed. Tom had never jumped for the guard at all, but had plunged head first into the river and dived under the wheel. It was nothing; I could have done it easy enough, and I said so; but everybody went on just the same, making a wonderful to-do over that ass, as if he had done something great. That girl couldn't seem to have enough of that pitiful "hero" the rest of the trip; but little I cared; I loathed her, anyway.

HERBERT CERWIN · *Not for Sale*

Mexico City has its opera season, symphony concerts, and art exhibitions. The streets are crowded with automobiles, the department stores packed. It is prosperous and busy, with a population of two million. Its business men are hard and shrewd and as cagey as Yankee traders. It is called the Paris of Latin America.

— From *These Are the Mexicans* by Herbert Cerwin, copyright, 1947, by Harcourt, Brace and Company, Inc.

But ten minutes by car out of the city, a farmer can be seen planting corn with a wooden stick as did his ancestors centuries ago. Forty minutes from the city, up a crooked dirt road in the Toluca hills, the village of Guadalupita is much as it was five hundred years ago.

We go there sometimes on Sundays. When we do we usually stop to visit old Faustino Perez, who with his son, Gabino, makes serapes on hand looms. Faustino with his fine-carved yellowish face must be sixty.

Tourists seldom come to the village, because the road is bad, but buyers from the stores come frequently. There are not many families in Mexico who make serapes as beautiful as those of Faustino and his son.

"How are you feeling?" I asked him the last time we saw him.

"Not so well," he said.

"The stomach?"

"It is my kidneys."

"Why don't you go to the city and see a doctor?"

"It is true, I should. But one is so busy these days. All the time they want to buy more serapes. One cannot make them fast. For the good ones it takes me almost a month."

"You could put in more looms and set your daughters to work," I suggested.

"One does not make serapes like that," he said with pride. "One must have a feeling for it in the hands, in the heart. Come, let me show you what my son is doing."

We followed him inside the hut. It was a dirt floor but, because this family is richer than most, there are two iron beds. On the table is an altar with candles, some red carnations, and a framed picture of the Virgin of Guadalupe, the patron saint of Mexico. In the corner are two looms. Gabino, who was operating one of them, greeted us but did not stop working. The serape on his loom was half finished. It had an intricate design of soft colors.

The old one, Faustino, pointed to the hand-drawn design above the loom which the son used as his guide. "He has drawn it himself," Faustino said. "Is it not beautiful?"

We examined the design on the wrapping paper. We knew that the son could neither read nor write, but that he was quick and clever with the pencil. We complimented them both.

"You see," the old man said, "to make such a serape one must have a feeling for it first. Perhaps one of my daughters could do it. Who knows? But it is not the work of a woman. Besides, they are busy getting married and having children. That is their work."

We left the loom. On the bed was an old serape, one of the finest we had seen.

"May I look at it?" I asked.

"Certainly," Faustino replied.

We took it out into the afternoon light to examine it more closely. It was thick and soft. The design was simple and powerful and the colors striking. In all of Mexico there are not many like this one.

"Faustino, will you sell it to us?" I asked.

"It is not for sale. It is ours."

"But I'll pay you what you ask for it. Besides, you could make another one like it."

The old one shook his head, a faint smile on his lips.

"It would not be like it. One cannot repeat oneself, is that not the truth?"

Yes, it is the truth, old Faustino. You and your son, who cannot read or write, make beautiful things.

"Perhaps next time," I said, "anyway we'll come and see you again soon."

"Always my home is yours," he said and followed us to the car.

Discussion

1. Is this anecdote told for its intrinsic interest or to present a lesson or a point? Explain.
2. Why is the information in the first two paragraphs necessary to the full appreciation of the anecdote?
3. Enumerate the details which show the poverty and lack of education of the Mexican family. Why do these details strengthen the narrative?
4. Does the author imply that the way of life of the Mexican villagers is in some ways superior to that of the average American workman?
5. Show that the speech of old Faustino reveals his character both as a man and as a Mexican peasant.

Writing

Write an account of a visit to a group of people whose way of life is markedly different from your own. Make some evaluation of their way of life as compared to yours.

A. B. GUTHRIE, JR. · *How to Stock a Pond*

We had a canopied truck and, in the bed of it, three hundred pounds of ice, in ten milk cans with screened tops, two tarpaulins, a double-cylindered tire pump, and a thermometer.

The trout-hatchery man had looked over our outfit approvingly. "Watch the temperature," he said. "If it goes up, cover the ice and the cans with the tarps. And pump some air into them cans once in a while."

"O.K."

"You'll be all right. You'll have some loss, but not too much."

We could stand some. We had five thousand rainbow fingerlings in the cans.

I gave the man my check for a hundred and fifty dollars.

My friend George had come along for company—and also the reasonable expectation of fishing for these fish some day. He asked, "Are you sure you haven't got too many to the can?"

"Sure," the man said. "You just work the pump once in a while, and they'll get plenty of oxygen."

A dead kingfisher lay in the grass by the truck. The man picked it up by one toe. "Once you get your fish planted, these are the babies you'll have to look out for."

"Oh."

"We shoot 'em all the time. They're death on trout."

"That's one thing I don't have to worry about," I said. "I haven't seen a kingfisher on the place all summer."

I ground the truck into low and we bumped to the highway. It was eight o'clock of a Montana evening. A three-quarter moon showed silver over the mountains to the east. In the west the sun

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— From *The Atlantic Monthly*, Vol. 183, June, 1949. By permission of A. B. Guthrie, Jr., and *The Atlantic Monthly*.

had left one dying streamer. It would be dark in half an hour. We had 283 miles to go and the Continental Divide to cross–283.6 miles. We knew. We had just driven it.

We headed east, for the two lakes that were mine now that, in partnership with my sister-in-law, I owned a little summer ranch near Choteau on the eastern slope of the Rockies. Elsewhere people would call them ponds, but in Montana any body of water that affords landing facilities for a mallard is a lake.

There had been fish, good ones, in the lakes once, until a combination of a dry summer and a hard winter killed them. We wanted fish there again. But we didn't want to get them from the state hatchery, for the state insists that the public has a right to cast for the fish it has paid to rear. We would buy the fish and post our place.

George and I made our first stop at Missoula. It was dark by then, and George took the flashlight from the jockey box and went around to look at the fish. "Lively as crickets," he said as I stepped back.

But they weren't. They just weren't, except for a comparative few that darted around near the surface. These were the ones he had seen. The rest, saving some obviously dead ones that floated belly up, lay in still, close bunches deep in the cans. When we stirred the water, the sad little masses of them rolled to the wash of it.

"They can't be dead," George said. "The man said to stop every fifty miles, and this isn't more'n forty. He said they might not need any air this soon."

"That's what he said." I checked the temperature. It was 52, or practically perfect.

"A dead fish comes to the top. These can't be dead."

"I don't know."

"They can't be. Let's give 'em some air. They might come out of it."

We got out the tire pump and pumped the cans, fifteen hard strokes to the can. It was an awkward thing, for the canopy was low and we had to crawl in over the tail gate and work the pump hunched over.

Then, numbed and silent, we hurried to a lunch counter and ate an overdue supper and hurried out again. The fish didn't look any better. We pumped some more and took their temperature. It was still 52. It was also ten o'clock.

We had been on the road since 6 A.M. and we were tired. We had ridden the sun down and the moon up and would ride the moon down and the sun up before we got to the lakes. The moon shone yellow, flattened toward the under side, as we rode through Hellgate Canyon and started up Clark Fork, up toward Drummond and Garrison and McDonald Pass over the Divide.

The roadsides swam by in the glare of the headlights, the borrow pits on either side, grown up in dusty clover, and beyond them the willows and cottonwoods still in the still air. The dark arches of the mountains raised around us. We saw a deer's face just off the road, fleeting and flat like a face caught with a flash bulb.

We pumped the cans at Drummond and Garrison and two lonely points between. One was high on a shoulder, and we turned the engine off and heard unseen water flowing below us, and above —so high it didn't touch us—the wind moving in the trees. It was too nice a night to be convoying sick fish or dead ones. Fifteen more pushes to the can. Temperature 53. George was humming a song. He sounded sleepy and sad.

"Maybe it's no use," I said, "but we'll go by instructions. No one's going to say we would have been all right if we had just kept on pumping."

"A dead fish comes to the top."

"Anyhow, we can keep alive the ones that are alive."

"Maybe there's more of them than you think."

"Maybe."

"Maybe quite a few more. The flashlight's pretty dim." George began to hum again.

But he was done with humming by the time we topped the hump and rolled down to Helena and leveled off for Wolf Creek. The moon had ridden its arc and the night was dead, and our bones ached and our minds had begun to drift with sleep. Fifteen strokes to the can. A hundred and fifty to the set. Temperature a steady 52. Back into the truck again. There was no traffic at this lost hour, no sound but the motor, nothing alive but the engine and the headlights and the slow road winding under us and the flat images of two deer and the black, rolly bulk of a porcupine. We missed him by a quill. Neither of us said anything.

We were still silent as we pulled in to Augusta, 53 miles from destination. The eastern sky was reddening, and it was 4.30 o'clock, and the temperature of the cans had dipped to 51. One, two, three. . . . The fish, caught by the dim eye of the flashlight, boiled up to the blow of air and settled again in their sad masses.

The town of Choteau hadn't awakened. We were grateful for that. We sneaked through. Just 23 miles to go now, but we stopped again anyhow. We didn't need the flash. We could see. The fish were dead all right, or most of them were. We took the temperature and we pumped just the same, pumped without speaking, pumped out of weary and perverse habit, and climbed back in the truck.

We counted the live ones when we got to the lakes. We dipped water out of the cans and dipped lake water in, so as to equalize the temperatures and not shock to death our gallant little band of survivors, and then we counted them and planted them tenderly, stumbling back and forth, sometimes giggling because we stumbled, or because things had gone sour, or for no reason at all.

There were 465 live ones. We slid the dead ones in an old posthole and covered them with stones. In the cheerful early-morning sun the western mountains glistened.

We lagged around to the vacant ranch house and put a pot of coffee on to boil.

"Anyhow," George said, looking at me through eyes drawn small, "you got a start on your fish."

I said, "Yeah, but they cost me better than thirty cents apiece." Still, he was right, and I said "Yeah" again, and looked out the window and thought I saw three birds on a dead limb over the spot where we had freed the fingerlings.

George has better eyes than I. I said, "Look," and while he looked one of the birds dropped from the limb and splashed the water.

He didn't need to tell me, "Kingfishers, sure as hell!"

EDWIN WAY TEALE · *Early Jottings*

W. H. Hudson, in one of his essays, refers to the process of putting down notes while walking afield as "picking up sticks." When you have enough sticks you can start a fire. When he had enough notes he could write an essay. Similarly Thomas Gray, of the classic *Elegy*, used to maintain that one note jotted down on the spot was worth a wagonload of reminiscences.

Before I was eight years old I was, without knowing it, following the precepts of Hudson and Gray. As I roamed the fields I scribbled down notes on the things I saw. The entries were made in little pocket notebooks, some brown, some black, some yellow. The spelling was erratic and the letters of the penciled words often headed in different directions. But the meaning of the sentences was clear.

"This morning," reads one entry, "I scrached my head in bed. The hairs rubed together and made a sqeek. Tipple-Tail, the kitten, jumped on my head." Another notation records: "While I was walking acros an open space, a kingbird flue down and struck me. This kept up until I hollered. Then it quit. This afternoon, when I went acros the same place, it hapened again. I saw the bird had a nest in a near by tree." "Today," a third memorandum states, "I saw a baby chick on its mother's back and the mother was walking along, too." "I wandered in the woods today, making nature notes," says a fourth entry. "I picked a pocketfull of wintergreen berrys there and sat on a mossy log eating them while a song sparrow sang to me." "Under the big oak tree," I put down on another day, "when I was writing in this book, Tipple-Tail kept trying to rub his whiskers on the end of my pencil."

Some of the notations were short and factual, such as: "Hairs do not turn into snakes." "Mole's fur can turn anyway and will not hold mold." "When I was little, a friend and I found a bulfrog that wouldent fit into a quart pail." "Chips fly as far as nine paces from the tree when flickers are burrowing a hole."

In one of the notebooks, with a well-eroded pasteboard

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cover, I entered a census-list of all the creatures I had seen at Lone Oak. With the original spelling intact, it reads: "Robin, nighthalk, red-headed woodpeccar, blue-bird, tad pole, high holor, swallow, tree toad, Virginia rale, rabit, morning dove, king fisher, mole, bat, cow, mink, meado mouse, song sparrow, eagle, buzard, dear mouse, coon, skunk, weasle, scarlit tanger, butcher bird, horse, blacksnake, gartersnake, rattelsnake, sheep, crain."

A whole notebook was labeled: "atmosphers." It was devoted to atmospheric bits and descriptive passages. Sample jottings follow: "In the top of the dead tree, two flickers noisly go up and down like see-saws." "The smoke is an aerial serpant." "Over Gunder's hill, the sunset was so red the rim of the hilltop looked like a prairie-fire was burning behind it." "Crybaby came to the door and mewed, She was covered with cobwebs." "It's too hot even to play. If there *is* a breeze, it seems afraid to move for fear it will get hot." "As the twylight lengthened, the only sounds were the 'Whack! Whack!' of an old man chopping wood and the 'Mooo!' of a brindle cow."

Most of my jottings were set down surreptitiously, out of the sight of people. William E. Barton, in his *The Life of Abraham Lincoln,* tells how he once encountered a small boy in a clearing among the mountains of Kentucky. He was standing beside a brook looking up at the sun coming over a range of hills and was repeating in a sing-song chant a rhyme that he had composed:

"Oh, Mountain, big and high:
I'll stand on you and I'll touch the sky!"

Each time he chanted it he listened to the echo of his voice. Suddenly he discovered the presence of a stranger on the little-traveled road. In embarrassment he slipped silently into the woods. Barton wanted to stop and talk to him, but the boy remained hidden. He was, as the author puts it, ashamed that he had been overheard in his dialogue with the high hill in whose shadow he dwelt.

Similarly, whenever strangers appeared on the road or called at the farm I hid my notebook and pencil. Because I was doing something different, something that nobody else I knew was doing, I had the feeling that I would be laughed at and considered queer. This deathly fear of ridicule remained with me for many years. It was only in later life that I learned the truth of the old adage: Sticks and stones they break my bones, but words they never hurt me! Words, in those days, were sticks and stones that seemed to break my bones.

Discussion

1. Does chronology determine the organization of this piece? If not, what is the plan of organization?
2. What purpose is served by the anecdote in paragraphs 7 and 8? Does the anecdote make for disunity in the selection?
3. What details of the extract show the boy to have been somewhat unusual? What ones show him as a typical boy?

Writing

Write a theme about an unusual hobby or other activity you or one of your friends engaged in as a youngster.

WILLIAM DEAN HOWELLS · *My Boy's Fears and Superstitions*

My boy [1] killed every snake he could; he thought it somehow a duty; all the boys thought so; they dimly felt that they were making a just return to the serpent-tribe for the bad behavior of their ancestor in the Garden of Eden. Once, in a corn-field near the Little Reservoir, the boys found on a thawing day of early spring knots and bundles of snakes writhen and twisted together, in the torpor of their long winter sleep. It was a horrible sight, that afterwards haunted my boy's dreams. He had nightmares which remained as vivid in his thoughts as anything that happened to him by day. There were no poisonous snakes in the region of the Boy's Town, but there were some large blacksnakes, and the boys said that if a blacksnake got the chance he would run up your leg, and tie himself round your body so that you could not breathe. Nobody had ever seen a blacksnake do it, and nobody had ever seen a

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— From *A Boy's Town*, 1890. Harper and Brothers, publishers.

[1] Throughout the book, Howells refers to himself as "my boy."

hoop-snake, but the boys believed there was such a snake, and that he would take his tail in his mouth, when he got after a person, and roll himself along swifter than the fastest racehorse could run. He did not bite, but when he came up with you he would take the point of his tail out of his mouth and strike it into you. If he struck his tail into a tree, the tree would die. My boy had seen a boy who had been chased by a hoop-snake, but he had not seen the snake, though for the matter of that the boy who had been chased by it had not seen it either; he did not stop to see it. Another kind of snake that was very strange was a hair-snake. No one had ever seen it happen, but every one knew that if you put long horsehairs into a puddle of water and let them stay, they would turn into hair-snakes; and when you drank out of a spring you had to be careful not to swallow a hair-snake, or it would remain in your stomach and grow there.

When you saw a lizard, you had to keep your mouth tight shut, or else the lizard would run down your throat before you knew it. That was what all the boys said, and my boy believed it, though he had never heard of anybody that it happened to. He believed that if you gave a chicken-cock burnt brandy it could lay eggs, and that if you gave a boy burnt brandy it would stop his growing. That was the way the circus-men got their dwarfs, and the India-rubber man kept himself limber by rubbing his joints with rattlesnake oil.

A snake could charm a person, and when you saw a snake you had to kill it before it could get its eye on you or it would charm you. Snakes always charmed birds; and there were mysterious powers of the air and forces of nature that a boy had to be on his guard against, just as a bird had to look out for snakes. You must not kill a granddaddy-long-legs, or a lady-bug; it was bad luck. My boy believed, or was afraid he believed, that

"What you dream Monday morning before daylight
Will come true before Saturday night,"

but if it was something bad, you could keep it from coming true by not telling your dream till you had eaten breakfast. He governed his little, foolish, frightened life not only by the maxims he had learned out of his "Gesta Romanorum" but by common sayings of all sorts, such as

"See a pin and leave it lay
You'll have bad luck all the day,"

and if ever he tried to rebel against this slavery, and went by a pin in the path, his fears tormented him till he came back and picked it up. He would not put on his left stocking first, for that was bad luck; but besides these superstitions, which were common to all the boys, he invented superstitions of his own, with which he made life a burden. He did not know why, but he would not step upon the cracks between the paving-stones, and some days he had to touch every tree or post along the sidewalk, as Doctor Johnson did in his time, though the boy had never heard of Doctor Johnson then. . . .

Once, he woke up in the night and found the full moon shining into his room in a very strange and phantasmal way, and washing the floor with its pale light, and somehow it came into his mind that he was going to die when he was sixteen years old. He could then only have been nine or ten, but the perverse fear sank deep into his soul, and became an increasing torture till he passed his sixteenth birthday and entered upon the year in which he had appointed himself to die. The agony was then too great for him to bear alone any longer, and with shame he confessed his doom to his father. "Why," his father said, "you are in your seventeenth year now. It is too late for you to die at sixteen," and all the long-gathering cloud of misery dropped from the boy's soul, and he lived till his seventeenth birthday and beyond it without further trouble. If he had known that he would be in his seventeenth year as soon as he was sixteen, he might have arranged his presentiment differently.

WILLIAM A. PERCY • *A Southerner at the Harvard Law School*

For the first month or two a chap named Freddie sat next to me in class and we usually exchanged casual remarks. He seemed nice and I knew nothing about him except that he was a real Hahvard, by which we outlanders meant a graduate of Harvard

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— From *Lanterns on the Levee* by William A. Percy, reprinted by permission of Alfred A. Knopf, Inc. Copyright 1941 by Alfred A. Knopf, Inc.

College with a broad *a.* I learned later that Freddie had been something of a person in college and came from an old and rich Boston family. One day as I was walking to the Square Freddie came toward me from it. It was our first meeting outside of classroom. He glanced up and recognized me. As I started to speak he looked me through and cut me dead. It was the first time I had ever been cut. I have never been more surprised or more angry. Inquiring later the reason for this gratuitous rudeness, I was told a Harvard man's prominence was gauged by the number of men he could afford to cut. Things may have changed there since my day. I hope so. With us a cut is used as a moral weapon, except by social climbers. It was our third year before Freddie and I met again as members of one of those silly exclusive clubs which young people, at best hopeless snobs, persist in forming, and on that occasion, I must confess, he was more affable than I. I think he really was a nice and intelligent young American. He just hadn't been brought up right. Gus Westfeldt, my roommate from New Orleans, had a similar experience, but his reaction was more instantaneous and effective than mine. He delivered the *Mayflower* princeling a sock on the jaw and a bit of advice which I recall but can't repeat. I guess they thought Southerners were queer too.

My next lesson in differences was more amusing. Harley Stowell and I had been invited to dine with a middle-aged professor and his wife at their home. Except for the usual bolt-upright atmosphere it was a tasteful house and everything except me ran smoothly and decorously. An immense bird-cage full of canaries filled one end of the dining-room to my right behind the host. On each plate sat a snowy napkin innocently folded and refolded into a sort of battleship. I must have been feeling unpardonably vivacious, for in undoing my napkin I gave it an airy little flirt to the right, and to my horror out of it soared a small brown roll shaped like a torpedo which described a slow parabola and lit with a wiry bang on top of the bird-cage. No one could pretend it hadn't happened. A bander-snatch or a whooping crane flying across the room could not have had higher visibility. The impact with the bird-cage sounded like a Stravinsky chord on an untuned harp, and all the canaries burst into a paean of dismay or applause. I couldn't decide whether I wanted to die or giggle. But my hosts never batted an eye. They were wonderful; their nerves must have been shattered, but, without allusion to projectiles, we proceeded to the soup course. To ignore completely such a calamity takes praiseworthy poise, but I'd have felt more reorganized if they had all gone Japanese and bombarded the bird-cage with their rolls, or, better still, if everyone had burst out laughing and cheered: "Good shot" or "It's a birdie" or "The last time Senator Omygosh did that he hit two canaries and killed the auk." Someone would surely have been that silly and that merciful a thousand miles south of the Charles.

MARJORIE KINNAN RAWLINGS · *Fear of Snakes*

I came to Cross Creek with such a phobia against snakes that a picture of one in the dictionary gave me what Martha calls "the all-overs." I had the common misconception that in Florida they were omnipresent. I thought, "If anything defeats me, sends me back to urban civilization, it will be the snakes." They were not ubiquitous as I had expected, but I saw one often enough to keep my anxiety alive. A black snake actually ran at me, and a chicken snake thrust his face into mine from a pantry shelf. These were harmless, I knew, but none the less revolting. I took my first faltering steps of progress through sheer shame. In a section where the country women possess great physical fearlessness, I felt feeble-minded to find myself screaming at the sight of a king snake that asked nothing more than a chance to destroy the rats that infested the old barn. I forced myself to stand still when I saw a snake in the weeds of the neglected house yard, at least long enough to determine its non-venomous nature. The only poisonous reptiles in Florida, I knew, were the rattlesnake and the cottonmouth moccasin, which I had already seen with horror, and the coral snake, which I did not know.

My determination to use common sense might have been my undoing. One late winter day in my first year I discovered under the palm tree by the gate a small pile of Amaryllis bulbs. The yard

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was desperate for flowers and greenery and I began separating the bulbs to set out for spring blooming. I dug with my fingers under the pile and brought out in my hand not a snake, surely, but a ten-inch long piece of Chinese lacquer. The slim inert reptile was an exquisite series of shining bands of yellow and black and vermilion, with a tiny black nose. I thought, "Here is a snake, in my hands, and it is as beautiful as a necklace. This is the moment in which to forget all nonsense." I let it slide back and forth through my fingers. Its texture was like satin. I played with it a long time, then killed it reluctantly with a stick, not for fear or hate, but because I decided to cure the skin for an ornament on the handle of a riding crop. I salted the hide and tacked it to a sunny wall. I showed it proudly to my friend Ed Hopkins, who was teaching me the Florida flora and fauna.

He said, "God takes care of fools and children."

The snake was the deadly coral snake. Its venom is of the cobra type, killing within a few minutes by a paralyzing of the nerves. The old terror was back again, and it seemed to me that I should never now be able to pass beyond it. I had no fear of death as death, but the medium was another matter, and one is certainly entitled to one's prejudices in so personal a matter. I found that I had still the blind, unthinking, "instinctive" horror of coming on a poisonous serpent. Nothing could warm the frozen column that replaced my spine at the thought of finding myself face to face with a Florida diamond-back rattler. In a varied life I had discarded one physical fear after another, finding them harmless when confronted. I said, "I am only afraid of the intangibles." Yet even such intangibles as poverty and loneliness might be, simply, accepted, and so disarmed. I discovered that for me rattlesnakes represented the last outpost of physical fear.

I discovered this when Ross Allen, a young Florida herpetologist, invited me to join him on a hunt in the upper Everglades—for rattlesnakes. . . .

Ross and I drove to Arcadia in his coupé on a warm January day.

I said, "How will you bring back the rattlesnakes?"

"In the back of my car."

My courage was not adequate to inquire whether they were thrown in loose and might be expected to appear between our feet.

Actually, a large portable box of heavy close-meshed wire made a safe cage. Ross wanted me to write an article about his work and on our way to the unhappy hunting grounds I took notes on a mass of data that he had accumulated in years of herpetological research. The scientific and dispassionate detachment of the material and the man made a desirable approach to rattlesnake territory. As I had discovered with the insects and varmints, it is difficult to be afraid of anything about which enough is known, and Ross' facts were fresh from the laboratory.

The hunting ground was Big Prairie, south of Arcadia and west of the northern tip of Lake Okeechobee. Big Prairie is a desolate cattle country, half marsh, half pasture, with islands of palm trees and cypress and oaks. At that time of year the cattlemen and Indians were burning the country, on the theory that the young fresh wire grass that springs up from the roots after a fire is the best cattle forage. Ross planned to hunt his rattlers in the forefront of the fires. They lived in winter, he said, in gopher holes, coming out in the midday warmth to forage, and would move ahead of the flames and be easily taken. We joined forces with a big Cracker named Will, his snake-hunting companion of the territory, and set out in early morning, after a long rough drive over deep-rutted roads into the open wilds.

I hope never in my life to be so frightened as I was in those first few hours. I kept on Ross' footsteps, I moved when he moved, sometimes jolting into him when I thought he might leave me behind. He does not use the forked stick of conventional snake hunting, but a steel prong, shaped like an L, at the end of a long stout stick. He hunted casually, calling my attention to the varying vegetation, to hawks overhead, to a pair of the rare whooping cranes that flapped over us. In mid-morning he stopped short, dropped his stick, and brought up a five-foot rattlesnake draped limply over the steel L. It seemed to me that I should drop in my tracks.

"They're not active at this season," he said quietly. "A snake takes on the temperature of its surroundings. They can't stand too much heat for that reason, and when the weather is cool, as now, they're sluggish."

The sun was bright overhead, the sky a translucent blue, and it seemed to me that it was warm enough for any snake to do as it willed. The sweat poured down my back. Ross dropped the rattler in a crocus sack and Will carried it. By noon, he had caught four. I felt faint and ill. We stopped by a pond and went swimming. The region was flat, the horizon limitless, and as I came out of the cool blue water I expected to find myself surrounded by a ring of rattlers. There were only Ross and Will, opening the lunch basket. I could not eat. Ross never touches liquor and it seemed to me that I would give my hope of salvation for a dram of whiskey. Will went back and drove his truck closer, for Ross expected the hunting to be better in the afternoon. The hunting was much better. When we went back to the truck to deposit two more rattlers in the wire cage, there was a rattlesnake lying under the truck.

Ross said, "Whenever I leave my car or truck with snakes already in it, other rattlers always appear. I don't know whether this is because they scent or sense the presence of other snakes, or whether in this arid area they come to the car for shade in the heat of the day."

The problem was scientific, but I had no interest.

That night Ross and Will and I camped out in the vast spaces of the Everglades prairies. We got water from an abandoned well and cooked supper under buttonwood bushes by a flowing stream. The camp fire blazed cheerfully under the stars and a new moon lifted in the sky. Will told tall tales of the cattlemen and the Indians and we were at peace.

Ross said, "We couldn't have a better night for catching water snakes."

After the rattlers, water snakes seemed innocuous enough. We worked along the edge of the stream and here Ross did not use his L-shaped steel. He reached under rocks and along the edge of the water and brought out harmless reptiles with his hands. I had said nothing to him of my fears, but he understood them. He brought a small dark snake from under a willow root.

"Wouldn't you like to hold it?" he asked. "People think snakes are cold and clammy, but they aren't. Take it in your hands. You'll see that it is warm."

Again, because I was ashamed, I took the snake in my hands. It was not cold, it was not clammy, and it lay trustingly in my hands, a thing that lived and breathed and had mortality like the rest of us. I felt an upsurgence of spirit.

The next day was magnificent. The air was crystal, the sky was aquamarine, and the far horizon of palms and oaks lay against the sky. I felt a new boldness and followed Ross bravely. He was making the rounds of the gopher holes. The rattlers came out in the mid-morning warmth and were never far away. He could tell by their trails whether one had come out or was still in the hole. Sometimes the two men dug the snake out. At times it was down so long and winding a tunnel that the digging was hopeless. Then they blocked the entrance and went on to other holes. In an hour or so they made the original rounds, unblocking the holes. The rattler in every case came out hurriedly, as though anything were preferable to being shut in. All the time Ross talked to me, telling me the scientific facts he had discovered about the habits of the rattlers.

"They pay no attention to a man standing perfectly still," he said, and proved it by letting Will unblock a hole while he stood at the entrance as the snake came out. It was exciting to watch the snake crawl slowly beside and past the man's legs. When it was at a safe distance he walked within its range of vision, which he had proved to be no higher than a man's knee, and the snake whirled and drew back in an attitude of fighting defense. The rattler strikes only for paralyzing and killing its food, and for defense.

"It is a slow and heavy snake," Ross said. "It lies in wait on a small game trail and strikes the rat or rabbit passing by. It waits a few minutes, then follows along the trail, coming to the small animal, now dead or dying. It noses it from all sides, making sure that it is its own kill, and that it is dead and ready for swallowing."

A rattler will lie quietly without revealing himself if a man passes by and it thinks it is not seen. It slips away without fighting if given the chance. Only Ross' sharp eyes sometimes picked out the gray and yellow diamond pattern, camouflaged among the grasses. In the cool of the morning, chilled by the January air, the snakes showed no fight. They could be looped up limply over the steel L and dropped in a sack or up into the wire cage on the back of Will's truck. As the sun mounted in the sky and warmed the moist Everglades earth, the snakes were warmed too, and Ross warned that it was time to go more cautiously. Yet having learned that it was we who were the aggressors; that immobility meant complete safety; that the snakes, for all their lightning flash in striking, were inaccurate in their aim, with limited vision; having watched again and again the liquid grace of movement, the beauty of pattern, suddenly I understood that I was drinking in freely the magnificent sweep of the horizon, with no fear of what might be at the moment under my feet. I went off hunting by myself, and though I found no snakes, I should have known what to do.

The sun was dropping low in the west. Masses of white cloud hung above the flat marshy plain and seemed to be tangled in the tops of distant palms and cypresses. The sky turned orange, then saffron. I walked leisurely back toward the truck. In the distance I could see Ross and Will making their way in too. The season was more advanced than at the Creek, two hundred miles to the north, and I noticed that spring flowers were blooming among the lumpy hummocks. I leaned over to pick a white violet. There was a rattlesnake under the violet.

If this had happened the week before, if it had happened the day before, I think I should have lain down and died on top of the rattlesnake, with no need of being struck and poisoned. The snake did not coil, but lifted its head and whirred its rattles lightly. I stepped back slowly and put the violet in a buttonhole. I reached forward and laid the steel L across the snake's neck, just back of the blunt head. I called to Ross:

"I've got one."

He strolled toward me.

"Well, pick it up," he said.

I released it and slipped the L under the middle of the thick body.

"Go put it in the box."

He went ahead of me and lifted the top of the wire cage. I made the truck with the rattler, but when I reached up the six feet to drop it in the cage, it slipped off the stick and dropped on Ross' feet. It made no effort to strike.

"Pick it up again," he said. "If you'll pin it down lightly and reach just back of its head with your hand, as you've seen me do, you can drop it in more easily."

I pinned it and leaned over.

"I'm awfully sorry," I said, "but you're pushing me a little too fast."

He grinned. I lifted it on the stick and again as I had it at head height, it slipped off, down Ross' boots and on top of his feet. He stood as still as a stump. I dropped the snake on his feet for the third time. It seemed to me that the most patient of rattlers might in time resent being hauled up and down, and for all the man's quiet certainty that in standing motionless there was no danger, would strike at whatever was nearest, and that would be Ross.

I said, "I'm just not man enough to keep this up any longer," and he laughed and reached down with his smooth quickness and lifted the snake back of the head and dropped it in the cage. It slid in among its mates and settled in a corner. The hunt was over and we drove back over the uneven trail to Will's village and left him and went on to Arcadia and home. Our catch for the two days was thirty-two rattlers.

I said to Ross, "I believe that tomorrow I could have picked up that snake."

Back at the Creek, I felt a new lightness. I had done battle with a great fear, and the victory was mine.

Discussion

1. What is the main idea or thesis of this selection?
2. How does the experience with the coral snake heighten the effectiveness of what follows?
3. Do the bits of description of the cattle country in which the snakes are found contribute to the main idea or lead away from it?
4. Does the information about rattlesnakes add much to the account? If so, why?
5. Is the account of the author's difficulties in putting the captured rattler in the cage an anti-climax? or does it help to make the point of the narrative?
6. Point out lines of dialogue which serve especially to reveal the drama of the author's experience.
7. Are the last two sentences of the selection indispensable?
8. Pick out concrete words and other devices which emphasize the author's fear.

Writing

A. Write a theme about an experience finding or hunting some kind of animal.

B. Write an account of how you conquered a fear—for example, of appearing in public as a speaker, actor, or performer on a musical instrument.

OLIVER LA FARGE · *Racing an Eight-Oared Shell*

In the due course of time it is given to you to row a race. Not a practice race against one of your own, but the real article, and the oars of the boat taking position on your port hand are painted, not crimson, but a fine, shining blue. The feeling of it starts before then, when you take your shell down and toss her better than you ever did before, and you and the managers are in a different, special communion over the free running of your slide, the grease on your oar where it passes through the lock, the comfort of the stretcher into which your feet are laced. The love you bear each man in the boat is stronger, warmer, than it has ever been; it is positive, almost visible. Each man looks smilingly at his neighbour—a curious combination, already the tension and the earnestness is on their faces, but with it comes this affection. You shove off and paddle along to the start taking it easily, perfecting your form, the cox saying just what he always says, everything ordinary, everything calming.

Starting an eight-oared race is a frightful job. There is the current, and then there will be a slight cross-wind, something you wouldn't notice if you weren't trying to hold two or more boats as light as cigar-boxes in perfect line beside each other. You jockey and jockey, the good effect of the paddle wears off. You get into position, the starter has asked "Are you ready Harvard? Are you ready Yale?" and one of the shells swings, and it all has to be done over again.

At last you are set. A racing start is entirely different from the ordinary process of getting a shell under way. This time you want to make her fly at full speed from the first stroke, you want to

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—From *Raw Material,* by Oliver La Farge. Copyright, 1945. Reprinted by permission of Houghton Mifflin Company, publishers.

develop speed just as fast as is humanly possible, and faster. You have practised many times the series of short, hard strokes and the lengthening to the full, rhythmed swing but it remains tricky, a complex set of motions to be done so rapidly and hard that it's unreasonable to think it can happen without something going wrong.

Beyond that lies the race, the test itself. You know what a gut-wracking process it is, you are too tense about the outcome, you doubt if you can stand up to it. What's ahead of you is too much. There are many things that can postpone a start and several that can cause a race to be called back within the first ten strokes. You pray for them all to happen. You are so taut inside you twang. You are afraid, not of anything, just afraid.

The pistol cracks. You carry out those first three, scrambling strokes neatly, you begin to form the full, balanced stroke as you go on to complete the ten fast ones. All those fears and tremors are gone and you are racing. Coxswain's voice comes, intentionally soothing, carrying you over into the regular swing and beat of the long-term pace your crew must set, you are eight men and you are one, the boat is going with a sizzle, smoothly through the water, and out of the corner of your eye you can see the blue blades flashing alongside you.

The effort settles down and mounts again. There are races within the race, spurts when one crew tries to pull suddenly ahead, and the other answers, the sustained, increasing efforts, the raised beats of the crew behind, the somehow easier but intense drives of the leader. Cox tells you you are past the halfway mark, he tells you you are near the end. The start tests a good crew, the last stretch proves it. You are tired now, everything is coming to a final settlement very soon, you must row harder, faster, and still row smoothly and well. You have got your second wind and used it up, you are pooped out and you know you are at the end of your strength, you simply have nothing left in you. The beat—the rate of the stroke—goes up. Cox is yelling, pleading, advising, cursing. And you are staying with it. On the recovery the captain grunts out something unintelligible but urgent. Near the end other men may wring out cries intended to be "Come on!" "Let's go!" hardly recognizable. There's not much of that, it's against your training and besides wind is too precious, but the pent-up feeling is so strong that sometimes it must have an outlet. This is a good crew, a real one. As the beat is raised, as the reserve behind the reserves of strength is poured in, each stroke taken as if it were the last you'd ever row on earth, the crew still swings together, it is still one, that awareness of each other and merging together is still present and still effective.

Three-quarters of the way through you could hear them on the referee's launch and whatever others are permitted to follow, shouting, "Come on Harvard! Come on Yale!" Now you vaguely know that they are still shouting, but you can't really hear them. There is some sort of sound around the finish line, you do know that a great many people must be making a lot of noise, but you don't hear that either. You are conscious of something arching up from the banks which, without looking at it, you *see*, and you know it's cheering. Your eyes are fixed on the shoulder of the man in front of you and (I rowed starboard side) the blade of Number Seven's oar, but the one thing you do know is exactly where the other boat is. Then here it comes, the final spurt, and you cease to hear or see anything outside your business. Faint and hardly noticeable the pistol fires, then cox says, "Easy all," and you loll forward.

Done. Like that, done, over, decided. And you are through, you are truly empty now, you have poured yourself out and for awhile you can hardly stand the effort of your own breathing but your tradition despises a man who fails to sit up in the boat. You have known complete exertion, you have answered every trouble of mind, spirit, and being with skilled violence and guided unrestraint, a complete happiness with eight other men over a short stretch of water has brought you catharsis.

Discussion

1. What feeling predominates throughout the selection and gives unity of impression?
2. Does the author write about a particular boat race? Explain your answer.
3. What qualities does the narrative get from the *you* form of narration? Could these qualities have been achieved if the story had been told in the first person?
4. Point out examples of colloquial language used to express feeling and of formal language used for exposition. Is the mixture of colloquial and formal language effective here? Explain your impression.

Writing

Write a theme in which you tell what it is like to play yourself out in a football game or other sports contest, or how you feel before, during, and after a speech, play, or performance of any other kind. Use either the first person or the generalized *you.*

ALICE HAMILTON ·

The Swat-the-Fly Campaign

It was while I was working at the Memorial Institute that an opportunity came for me to bring my scientific training to bear on a problem at Hull-House. . . . This was in the fall of 1902, when I came back from Mackinac to find Chicago in the grip of one of her worst epidemics of typhoid fever. At that time the water, drawn from the Lake, was not chlorinated; the only precaution taken against dangerous pollution was to make daily cultures of samples from the different pumping stations and the next day, when the cultures had had time to develop, publish the results and tell the public whether or not to boil the water. It was assumed that housewives would look up these instructions every day and act accordingly, but the actual result was that typhoid was endemic in Chicago and periodically it reached epidemic proportions. On this particular occasion Hull-House was the center of the hardest-struck region of the city—why, nobody knew. Miss Addams said she thought a bacteriologist ought to be able to discover the reason.

It was certainly not a simple problem. The pumping station which sent water to the Nineteenth Ward sent it to a wide section of the West Side; the milk supply was the same as that for neighboring wards. There must be some local condition to account for the excessive number of cases. As I prowled about the streets and the ramshackle wooden tenement houses I saw the outdoor privies (forbidden by law but flourishing nevertheless), some of them in

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—From *Exploring the Dangerous Trades: The Autobiography of Alice Hamilton, M.D.*, copyright, 1943, by Alice Hamilton and used by her permission.

backyards below the level of the street and overflowing in heavy rains; the wretched water closets indoors, one for four or more families, filthy and with the plumbing out of order because nobody was responsible for cleaning or repairs; and swarms of flies everywhere. Here, I thought, was the solution of the problem. The flies were feeding on typhoid-infected excreta and then lighting on food and milk. During the Spanish-American War, when we lost more men from typhoid fever than from Spanish bullets, Vaughan, Shakespeare, and Reed had made a study of conditions in camps—open latrines, unscreened food—which led them to attribute an important role in the spread of typhoid fever to the house fly. That was what started the "Swat the fly" campaign.

Naturally, my theory had to be put to the test, so, with two of the residents to help me, Maude Gernon and Gertrude Howe, I went forth to collect flies—from privies and kitchens and filthy water closets. We would drop the flies into tubes of broth and I would take them to the laboratory, incubate the tubes, and plate them out at varying intervals. It was a triumph to find the typhoid bacillus and I hastened to write up the discovery and its background for presentation before the Chicago Medical Society. This was the sort of thing to catch public attention: it was simple and easily understood; it fitted in with the revelations made during the Spanish War of the deadly activities of house flies, and it explained why the slums had so much more typhoid than the well-screened and decently drained homes of the well-to-do.

I am sure I gained more kudos from my paper on flies and typhoid than from any other piece of work I ever did. Even today I sometimes hear an echo of it. In Chicago the effect was most gratifying: a public inquiry resulted in a complete reorganization of the Health Department under a chief loaned by the Public Health Service, and an expert was put in charge of tenement-house inspection. But unfortunately my gratification over my part in all this did not last long. After the tumult had died down I discovered a fact which never gained much publicity but was well-authenticated. My flies had had little or nothing to do with the cases of typhoid in the Nineteenth Ward. The cause was simpler but so much more discreditable that the Board of Health had not dared reveal it. It seems that in our local pumping station, on West Harrison Street, near Halsted, a break had occurred which resulted in an escape of sewage into the water pipes and for three days our neighborhood drank that water before the leak was discovered and stopped. This was after the epidemic had started. The truth was more shocking than my ingenious theory, and it never came to light, so far as the public was concerned. For years, although I did my best to lay the ghosts of those flies, they haunted me and mortified me, compelling me again and again to explain to deeply impressed audiences that the dramatic story their chairman had just rehearsed had little foundation in fact.

Discussion

1. Discuss the selection as an illustration of the scientific method. What hypothesis was formed by the writer? What shattered this widely publicized hypothesis? Might any hypothesis suffer a similar fate?
2. Compare the essay with Huxley's "The Method of Scientific Investigation" (pp. 242–249). Could Dr. Hamilton's reasoning serve as one of Huxley's examples of scientific thinking?

Writing

Write a narrative in which you show how a hypothesis of yours worked out in actual practice, or how practical experience led you to a generalization. The way to catch fish (time of day, type of bait, etc.), trap animals, train for an athletic event, outwit an opponent in a game, win an election, sell a certain product, explain a friend's character, entertain small children—these may suggest an everyday subject suitable for a lively theme.

HENRY DAVID THOREAU · *The Bream*

The fresh-water Sun-Fish, Bream, or Ruff, *Pomotis vulgaris,* . . . is the most common [fish] of all, and seen on every urchin's string; a simple and inoffensive fish, whose nests are visible all along the shore, hollowed in the sand, over which it is steadily

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—From *A Week on the Concord and Merrimack Rivers,* 1849. Houghton Mifflin Company, present publishers.

poised through the summer hours on waving fin. Sometimes there are twenty or thirty nests in the space of a few rods, two feet wide by half a foot in depth, and made with no little labor, the weeds being removed, and the sand shoved up on the sides, like a bowl. Here it may be seen early in summer assiduously brooding, and driving away minnows and larger fishes, even its own species, which would disturb its ova, pursuing them a few feet, and circling round swiftly to its nest again; the minnows, like young sharks, instantly entering the empty nests, meanwhile, and swallowing the spawn, which is attached to the weeds and to the bottom, on the sunny side. The spawn is exposed to so many dangers that a very small proportion can ever become fishes, for beside being the constant prey of birds and fishes, a great many nests are made so near the shore, in shallow water, that they are left dry in a few days, as the river goes down. These and the lamprey's are the only fishes' nests that I have observed, though the ova of some species may be seen floating on the surface. The breams are so careful of their charge that you may stand close by in the water and examine them at your leisure. I have thus stood over them half an hour at a time, and stroked them familiarly without frightening them, suffering them to nibble my fingers harmlessly, and seen them erect their dorsal fins in anger when my hand approached their ova, and have even taken them gently out of the water with my hand; though this cannot be accomplished by a sudden movement, however dexterous, for instant warning is conveyed to them through their denser element, but only by letting the fingers gradually close about them as they are poised over the palm, and with the utmost gentleness raising them slowly to the surface. Though stationary, they keep up a constant sculling or waving motion with their fins, which is exceedingly graceful, and expressive of their humble happiness; for unlike ours, the element in which they live is a stream which must be constantly resisted. From time to time they nibble the weeds at the bottom or overhanging their nests, or dart after a fly or a worm. The dorsal fin, besides answering the purpose of a keel, with the anal, serves to keep the fish upright, for in shallow water, where this is not covered, they fall on their sides. As you stand thus stooping over the bream in its nest, the edges of the dorsal and caudal fins have a singular dusty golden reflection, and its eyes, which stand out from the head, are transparent and colorless. Seen in its native element, it is a very beautiful and compact fish, perfect in all its parts, and looks like a brilliant coin fresh from the mint. It is a perfect jewel of the river, the green, red, coppery, and golden reflections of its mottled sides being the concentration of such rays as struggle through the floating pads and flowers to the sandy bottom, and in harmony with the sunlit brown and yellow pebbles. Behind its watery shield it dwells far from many accidents inevitable to human life.

HENRY DAVID THOREAU · *The Loon*

As I was paddling along the north shore one very calm October afternoon, . . . having looked in vain over the pond for a loon, suddenly one, sailing out from the shore toward the middle a few rods in front of me, set up his wild laugh and betrayed himself. I pursued with a paddle and he dived, but when he came up I was nearer than before. He dived again, but I miscalculated the direction he would take, and we were fifty yards apart when he came to the surface this time, for I had helped to widen the interval; and again he laughed long and loud, and with more reason than before. He manœuvred so cunningly that I could not get within half a dozen rods of him. Each time, when he came to the surface, turning his head this way and that, he coolly surveyed the water and the land, and apparently chose his course so that he might come up where there was the widest expanse of water and at the greatest distance from the boat. It was surprising how quickly he made up his mind and put his resolve into execution. He led me at once to the widest part of the pond, and could not be driven from it. While he was thinking one thing in his brain, I was endeavoring to divine his thought in mine. It was a pretty game, played on the smooth surface of the pond, a man against a loon. Suddenly your adversary's checker disappears beneath the board, and the problem is to place yours nearest to where his will appear again. Sometimes he would come up unexpectedly on the opposite side of me, having apparently passed directly under the boat. So

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— From *Walden*, 1854. Houghton Mifflin Company, present publishers.

long-winded was he and so unweariable, that when he had swum farthest he would immediately plunge again, nevertheless; and then no wit could divine where in the deep pond, beneath the smooth surface, he might be speeding his way like a fish, for he had time and ability to visit the bottom of the pond in its deepest part. It is said that loons have been caught in the New York lakes eighty feet beneath the surface, with hooks set for trout,—though Walden is deeper than that. How surprised must the fishes be to see this ungainly visitor from another sphere speeding his way amid their schools! Yet he appeared to know his course as surely under water as on the surface, and swum much faster there. Once or twice I saw a ripple where he approached the surface, just put his head out to reconnoitre, and instantly dived again. I found that it was as well for me to rest on my oars and wait his reappearing as to endeavor to calculate where he would rise; for again and again, when I was straining my eyes over the surface one way, I would suddenly be startled by his unearthly laugh behind me. But why, after displaying so much cunning, did he invariably betray himself the moment he came up by that loud laugh? Did not his white breast enough betray him? He was indeed a silly loon, I thought. I could commonly hear the plash of the water when he came up, and so also detected him. But after an hour he seemed as fresh as ever, dived as willingly, and swam yet farther than at first. It was surprising to see how serenely he sailed off with unruffled breast when he came to the surface, doing all the work with his webbed feet beneath. His usual note was this demoniac laughter, yet somewhat like that of a waterfowl; but occasionally, when he had balked me most successfully and come up a long way off, he uttered a long-drawn unearthly howl, probably more like that of a wolf than any bird; as when a beast puts his muzzle to the ground and deliberately howls. This was his looning—perhaps the wildest sound that is ever heard here, making the woods ring far and wide. I concluded that he laughed in derision of my efforts, confident of his own resources. Though the sky was by this time overcast, the pond was so smooth that I could see where he broke the surface when I did not hear him. His white breast, the stillness of the air, and the smoothness of the water were all against him. At length, having come up fifty rods off, he uttered one of those prolonged howls, as if calling on the god of loons to aid him, and immediately there came a wind from the east and rippled the surface, and filled the whole air with misty rain, and I was impressed as if it were the prayer of the loon answered, and his god was angry with me; and so I left him disappearing far away on the tumultuous surface.

Discussion

1. To what extent are the details in this selection cool, detached scientific observations and to what extent playful curiosity and humor? Point out humorous details.
2. How does Thoreau's purpose in this selection differ from his purpose in "The Bream," pp. 42–44?
3. Show where in the selection new paragraphs could have been started.
4. Notice the many vividly accurate verbs which indicate the various actions of the loon. Mark ten descriptive verbs which you think especially effective.
5. Examine the following words and phrases in their contexts and give their meaning as Thoreau uses them:
   divine, wit, reconnoitre, betray, a silly loon, demoniac laughter, balked, looning.
   Discuss the connotations of these words: their flavor and effect beyond the simple dictionary meanings they may have.

Writing

A. Recount an experience you have had observing a wild creature in its natural environment.

B. Recount an interesting vacation experience.

LLOYD LEWIS • *A Founding Father Returns*

1 In the U. S. Senate building on November 23, 1945, assorted senators and congressmen were inquiring into the reasons for the disaster at Pearl Harbor. Some 300 people were packed in closely arrayed chairs, under the movie camera shelves, around the walls,

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—From *It Takes All Kinds,* by Lloyd Lewis. Copyright, 1947, by Harcourt, Brace and Company, Inc., and used by their permission.

in behind the map easels, and back of the august Inquisitors. In what was practically the middle of the room, facing the committee and flanked on either side by tablesful of lawyers, reporters, and stenographers, was an empty chair, wherein on previous days had sat admirals and Army officers telling what they knew and trying to hold onto their stories in the face of badgering questions.

2 It was the hot seat and the word had gone around that it would be hotter than ever today, for Cordell Hull, the man some of the Inquisitors were really after, was to testify.

3 The spectators' seats and standing spots had filled early, and now the police were busy at the door. From the marble corridors outside came the murmuring of many disappointed citizens.

4 Finally, there was a special rustle at the door and an exhalation in the craning crowd. A white head suddenly towered above the audience, the movie lights flared on, and Cordell Hull, all in black, his overcoat draped over his shoulders, his handsome face, pale from long illness, his hair dazzling in the spotlight, came to the witness chair.

5 He poised his six feet three inches like an ancient white sycamore, lean, weathered, frail, but still standing after many storms, and ready, now, for a new one. You could half-hear, half-feel a gasp of admiration running through the crowd, for the old statesman with the spotlight on his long face, was as classic as a Greek statue. Indeed, he might have been coming to sit as a model for a class in antique art—a Roman senator facing judgment.

6 A woman next to me leaned forward and whispered to herself, "Beautiful! Beautiful!" as if she had suddenly been shown an ermine coat.

7 Cordell Hull is one of the few men whom old age has made handsomer—whom decay has made nobler and statelier.

8 Standing there, he had more presence than anyone I have ever seen since the days of Christy Mathewson, the baseball pitcher, or Albert J. Beveridge, the orator. And, as I remember them, his presence was greater than theirs, for his was wholly without self-consciousness.

9 Hull had risen from the sickroom where he had lain since his resignation as Secretary of State. He had insisted that his physician let him testify as to whether he had or had not provoked the Japanese into making their surprise attack upon Pearl Harbor. His

physician had said he could appear for forty-five minutes—no longer. And as he stood there this seemed too much.

10 The extraordinary thing was that he had actually been gone from the very center of the world for only a few months. Only out of the secretary's chair for a little while, yet here he was stalking back to us as if from Bunker Hill. As he stood there, he might have been George Washington or Thomas Jefferson. He looked like a Founding Father. On that white and serene old face was the story of the Republic, a particular blend of idealism and backwoods cunning—the aquiline nose of Uncle Sam himself, the wide, mobile mouth of the frontiersman, the heavy eyelid of the dreamer half hiding the steady eye which could look through a foreign aristocrat or drop a squirrel at 200 paces—either one.

11 It wasn't the composure of Lincoln nor the gravity of Robert E. Lee that you thought of, as he stood there. No, it was something further back than that, something back of even Old Hickory Jackson. Hull seemed to come out of the Revolution itself, a place neither North nor South, a time when the Republic was taking root. The terms Democrat or Republican, New Dealer, Old Dealer—none of them fit him now. You couldn't say he was a Tennessean, though he had been reared there. You couldn't remember that he had once been a poor mountain boy, or a shrewd, sagacious senator. You could hardly think of him now as our most famous Secretary of State, so wholly had he, in his retirement, passed on into the American Olympus.

12 And his foes on the committee, the ones who had hoped to wring from him the confession that he and President Roosevelt had enticed the Japs into giving them the war they wanted, these Inquisitors knew the jig was up before ever the old man spoke a word. Such questions as were put to him were put almost with reverence, and no one grew sharp or prying with him even after he warmed to his task and lost the frailty of voice that had been his at the beginning of his testimony.

13 When told that his forty-five minutes were up and that the committee wished not to detain him longer, he said to go ahead, he was all right. And he held the committee for fifteen minutes more, damning the Japs with solemn unemotional pronouncements and sage ruralism, describing the devices, the patient arguments, the long beseechments he had employed to keep the mad little

yellow men from the course which was to end them among the atomic cinders.

14 At length, for his own health's sake, Hull's testimony was courteously ended by the committee chairman, and, bowing his thanks, he walked his stately walk out through the crowd which stood, and for the first time during the inquiry, broke into rolling applause.

15 Behind him stood the witness chair which had for him turned out to be no hot seat at all, but instead something more like a cracker box—or a throne.

Discussion

1. Show that the selection is a piece of interpretive reporting which records both the writer's impressions and those of others present. How does the author emphasize the impression made by Cordell Hull?
2. Why can this sketch be called dramatic? Why do the descriptions of the room and the crowd and reference to what had happened in the room on previous days add to the drama?
3. Comment on the effectiveness of comparing the ex-Secretary of State to a Roman senator facing judgment and to a Founding Father.
4. What evidence is there in the selection that the author is qualified to judge the event recorded?
5. Explain the following phrases, which occur in the paragraphs indicated by number:
   badgering questions (1), *a special rustle* (4), *a blend of idealism and backwoods cunning* (10), *into the American Olympus* (11), *sage ruralism* (13), *a cracker-box or a throne* (15).
6. The following can be called "low" colloquialisms: "*hot seat*" (2), "The man they were really *after*" (2), *the jig was up*" (12). Are they acceptable in their contexts, or would you have preferred more dignified language? Explain your choice.
7. Find a dozen words which seem to be used primarily for their connotations—for their overtones of feeling and meaning rather than their basic dictionary meanings.

Writing

Write a composition of about the length of Lewis's in which you present your impressions on observing or meeting a prominent person. The subject need not be in national politics. Your mayor, the governor of your state, your superintendent of schools, an important local manufacturer, or a local woman known for her philanthropy—these are good subjects. Follow Lewis in making your report interpretive. Your observations might be based on impressions received from watching your subject on the television screen.

RALPH WALDO EMERSON • *A Visit With Wordsworth*

On the 28th August, I went to Rydal Mount, to pay my respects to Mr. Wordsworth. His daughters called in their father, a plain, elderly, white-haired man, not prepossessing, and disfigured by green goggles. He sat down, and talked with great simplicity. He had just returned from a journey. His health was good, but he had broken a tooth by a fall, when walking with two lawyers, and had said that he was glad it did not happen forty years ago; whereupon they had praised his philosophy.

He had much to say of America, the more that it gave occasion for his favorite topics—that society is being enlightened by a superficial tuition, out of all proportion to its being restrained by moral culture. Schools do no good. Tuition is not education. He thinks more of the education of circumstances than of tuition. 'Tis not question whether there are offenses of which the law takes cognizance, but whether there are offenses of which the law does not take cognizance. Sin is what he fears,—and how society is to escape without gravest mischiefs from this source? He has even said, what seemed a paradox, that they needed a civil war in America, to teach the necessity of knitting the social ties stronger.

——From *English Traits,* 1856. Text taken from Riverside Edition, Houghton Mifflin Company, 1884, V, 21–27.

"There may be," he said, "in America some vulgarity in manner, but that's not important. That comes of the pioneer state of things. But I fear they are too much given to the making of money; and secondly, to politics; that they make political distinction the end and not the means. And I fear they lack a class of men of leisure,—in short, of gentlemen,—to give a tone of honor to the community. I am told that things are boasted of in the second class of society there, which, in England,—God knows, are done in England every day, but would never be spoken of. In America I wish to know not how many churches or schools, but what newspapers? My friend Colonel Hamilton, at the foot of the hill, who was a year in America, assures me that the newspapers are atrocious, and accuse members of Congress of stealing spoons!" He was against taking off the tax on newspapers in England,—which the reformers represent as a tax upon knowledge,—for this reason, that they would be inundated with base prints. He said he talked on political aspects, for he wished to impress on me and all good Americans to cultivate the moral, the conservative, &c., &c., and never to call into action the physical strength of the people, as had just now been done in England in the Reform Bill. . . .

He let me out into his garden, and showed me the gravel walk in which thousands of his lines were composed. His eyes are much inflamed. This is no loss except for reading, because he never writes prose; and of poetry he carries even hundreds of lines in his head before writing them. He had just returned from a visit to Staffa, and within three days had made three sonnets on Fingal's Cave, and was composing a fourth when he was called in to see me. He said "If you are interested in my verses perhaps you will like to hear these lines." I gladly assented and he recollected himself for a few moments and then stood forth and repeated, one after the other, the three entire sonnets with great animation. I fancied the second and third more beautiful than his poems are wont to be. The third is addressed to the flowers, which, he said, especially the ox-eye daisy, are very abundant on the top of the rock. The second alludes to the name of the cave, which is "Cave of Music"; the first to the circumstance of its being visited by the promiscuous company of the steamboat.

This recitation was so unlooked for and surprising,—he, the old Wordsworth, standing apart, and reciting to me in a garden-walk, like a schoolboy declaiming,—that I at first was near to laugh; but recollecting myself, that I had come thus far to see a poet and he was chanting poems to me, I saw that he was right and I was wrong, and gladly gave myself up to hear. I told him how much the few printed extracts had quickened the desire to possess his unpublished poems. He replied he never was in haste to publish; partly because he corrected a good deal, and every alteration is ungraciously received after printing; but what he had written would be printed, whether he lived or died. I said "Tintern Abbey" appeared to be the favorite poem with the public, but more contemplative readers preferred the first books of the "Excursion," and the Sonnets. He said "Yes, they are better." He preferred such of his poems as touched the affections, to any others; for whatever is didactic,—what theories of society, and so on,—might perish quickly; but whatever combined a truth with an affection was κτῆμα ἐς ἀεί, good to-day and good for ever. He cited the sonnet "On the feelings of a highminded Spaniard," which he preferred to any other (I so understood him), and the "Two Voices"; and quoted, with evident pleasure, the verses addressed "To the Skylark." In this connection he said of the Newtonian theory that it might yet be superseded and forgotten; and Dalton's atomic theory.

When I prepared to depart he said he wished to show me what a common person in England could do, and he led me into the enclosure of his clerk, a young man to whom he had given this slip of ground, which was laid out, or its natural capabilities shown, with much taste. He then said he would show me a better way towards the inn; and he walked a good part of a mile, talking and ever and anon stopping short to impress the word or the verse, and finally parted from me with great kindness and returned across the fields.

Wordsworth honored himself by his simple adherence to truth, and was very willing not to shine; but he surprised by the hard limits of his thought. To judge from a single conversation, he made the impression of a narrow and very English mind; of one who paid for his rare elevation by general tameness and conformity. Off his own beat, his opinions were of no value. It is not very rare to find persons loving sympathy and ease, who expiate their departure from the common in one direction, by their conformity in every other.

THOMAS JEFFERSON · *George Washington*

I think I knew General Washington intimately and thoroughly; and were I called on to delineate his character, it should be in terms like these:

His mind was great and powerful, without being of the very first order; his penetration strong, though not so acute as that of a Newton, Bacon, or Locke; and as far as he saw, no judgment was ever sounder. It was slow in operation, being little aided by invention or imagination, but sure in conclusion. Hence the common remark of his officers, of the advantage he derived from councils of war, where, hearing all suggestions, he selected whatever was best; and certainly no general ever planned his battles more judiciously. But if deranged during the course of the action, if any member of his plan was dislocated by sudden circumstances, he was slow in re-adjustment. The consequence was, that he often failed in the field, and rarely against an enemy in station, as at Boston and York. He was incapable of fear, meeting personal dangers with the calmest unconcern. Perhaps the strongest feature in his character was prudence, never acting until every circumstance, every consideration, was maturely weighed; refraining if he saw a doubt; but when once decided, going through with his purpose, whatever obstacles opposed. His integrity was most pure, his justice the most inflexible I have ever known; no motives of interest, of consanguinity, of friendship or hatred, being able to bias his decision. He was, indeed, in every sense of the words, a wise, a good, and a great man. His temper was naturally irritable and high-toned; but reflection and resolution had obtained a firm and habitual ascendancy over it. If ever, however, it broke its bonds, he was most tremendous in his wrath. In his expenses he was honorable but exact; liberal in contributions to whatever promised utility, but frowning and unyielding on all visionary projects and all unworthy calls on his charity. His heart was not warm in its affections; but he exactly calculated every man's value, and gave

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— From a letter to Dr. Walter Jones, January 2, 1814, as printed in *Alexander Hamilton and Thomas Jefferson, Representative Selections,* by Frederick C. Prescott, American Book Company, 1934.

him a solid esteem proportioned to it. His person, you know, was fine; his stature exactly what one would wish; his deportment easy, erect, and noble; the best horseman of his age, and the most graceful figure that could be seen on horseback. Although in the circle of his friends, where he might be unreserved with safety, he took a free share in conversation, his colloquial talents were not above mediocrity, possessing neither copiousness of ideas nor fluency of words. In public, when called on for a sudden opinion, he was unready, short, and embarrassed. Yet he wrote readily, rather diffusely, in an easy and correct style. This he had acquired by conversation with the world, for his education was merely reading, writing, and common arithmetic, to which he added surveying at a later day. His time was employed in action chiefly, reading little, and that only in agriculture and English history. His correspondence became necessarily extensive, and with journalizing his agricultural proceedings, occupied most of his leisure hours within doors. On the whole, his character was in its mass perfect, in nothing bad, in few points indifferent; and it may truly be said that never did nature and fortune combine more perfectly to make a man great, and to place him in the same constellation with whatever worthies have merited from man an everlasting remembrance. For his was the singular destiny and merit, of leading the armies of his country successfully through an arduous war, for the establishment of its independence; of conducting its councils through the birth of a government new in its form and principles, until it had settled down into a quiet and orderly train; and of scrupulously obeying the laws through the whole of his career, civil and military, of which the history of the world furnishes no other example.

Discussion

1. Note that Washington is presented entirely in general and abstract terms, without anecdote or dialogue. What are the advantages and disadvantages of this technique of characterization? Compare this technique with that of "A Founding Father Returns," pp. 46-49.
2. Remembering that Jefferson and Washington did not always agree politically, would you say that the author is unbiased in his estimate of Washington? Give evidence for your stand.
3. Does Jefferson present a unified conception of Washington? Do you visualize Washington as you read, or do you feel

that no person could have such a combination of traits as Jefferson finds in his subject? Explain your answer.

4. Does the author seem to be a shrewd judge of human nature? Give examples of keen observation.
5. Could the long second paragraph have been divided into two or more paragraphs?
6. What is the quality of the diction? Is it formal or informal, simple or learned? Explain by giving examples. What does the style indicate about the man to whom Jefferson's letter is addressed?
7. After you have studied each of the following words in its context, consult an unabridged dictionary for the definition which applies:
   invention, deranged, member, maturely, integrity, interest, consanguinity, utility, visionary, deportment, colloquial, short, worthies, singular, train.
8. Make changes in punctuation to conform to current practice.

Writing

Write a compact, orderly summary of the traits of some person you have known for a long time.

HELEN CLAPESATTLE · *Dr. Charlie and Dr. Will*

The two men were utterly unlike. Dr. Charlie's supreme gift was for human contacts. He had a way about him that won the liking of everyone he met, grumpy patient or hard-boiled doctor, and to the end of his active service the men on the Clinic floor called on him to pull their chestnuts out of the fire when they were in trouble with an obstreperous patient. He was at his best in allaying the groundless fears that in many cases needlessly complicate physical disorders, and his Clinic colleagues still give thanks for the lessons he taught them in the art of medicine. The

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— From *The Doctors Mayo*, by Helen Clapesattle, University of Minnesota Press, 1941.

simple expedients he suggested—like eating half a bag of popcorn every night to correct an imagined stomach ailment—might not be justified in physiology or pharmacology, but they were good psychology and invariably turned the trick of settling the patient's worried mind.

His daily visits to his patients were like those of a wise, gay-spirited friend. If the patient was discouraged, perhaps at the prospect of a life handicapped by ill health or the loss of a limb, Dr. Charlie would sit down on the edge of the bed—he knew when the best of rules should be broken—and talk for ten minutes or half an hour if necessary, till he had made the future seem less dreary. "Even his smile would make you want to get better, just to show the world you could," wrote one patient in after years. "Because he always made me feel so much better I asked for him often," wrote another. "And he always came."

Dr. Will's visits were likely to be rather impressive ceremonies, conducted in the presence of a group of assistants. He was as kindly as his brother and even wiser, but his cheer was studied, his jokes deliberate. Unlike Dr. Charlie's they did not flow spontaneously. He had to take thought to be friendly.

One day as he was leaving St. Mary's a patient who was also leaving spoke to him, to say good-bye. Dr. Will had his hat in one hand, his coat in the other, so he just bade the man a cordial good-bye and wished him health. But later that afternoon he told his secretary about it, saying he had failed in that case, that he should have dropped his coat on the floor or something, anything to shake hands with that man. He spoke of it several times in the next day or two, wishing he had shaken hands with that patient.

Dr. Charlie always had "a tickle at the end of his tongue for a pleasantry." Many of those who knew him have likened him to his friend Will Rogers, both in the slow nasal drawl with which he spoke and in his ability to put a common-sense truth in homely, salty phrases that gave it added punch. He was quick to deflate pretentiousness. When some member of the family was boasting about a connection with the Mayos who had come over to Virginia in colonial days, he remarked, with something less than historical accuracy, "Yes, that was when Virginia was a penal colony."

Dr. Will was more austere always. Some of his staff and associates, even some of the younger members of the family, were more than a little awed by him. One of the younger sisters at St. Mary's who worked closely with both men expressed the reaction to them this way: "We all loved Dr. Charlie; he was so easy and approachable, so democratic. Whereas we were all scared to death of Dr. Will; he was so dignified and reserved."

Part of that reserve was the schooled aloofness of every executive, set apart by the mere fact of his authority and condemned to impartiality regardless of his personal feelings. But in the main Dr. Will's reserve was a trait he could not help. Although intellectually he sympathized with and understood the reactions of the common man, he was an aristocrat in disposition.

Sitting on the lawn of Mayowood one afternoon, Dr. Will looked after Dr. Charlie, who was just walking away with a trio of friends, and in a rare moment of self-revelation remarked to Mrs. Charlie, "Everybody likes Charlie, don't they? They aren't afraid of him. No one ever claps me on the back the way they all do him." And then after a minute, "But I guess I wouldn't like it if they did."

When that story was repeated to one of the Clinic executives he exclaimed, "That's it. That was the difference between them. Many a time when Dr. Charlie came in to talk to me I helped him on with his overcoat and then with my arm around his shoulders walked out into the hall with him. But I would never have thought of touching Dr. Will in any way." And another of the staff members put it succinctly: "You could visit for hours with Dr. Charlie, but when Dr. Will came in you got right to the point." The very names by which they were known reflect this difference; the affectionate diminutive did not survive early childhood for the elder brother.

BERTHA DAMON · *A Pretty Town*

Ours was a pretty town to look at. It had come into being, I suppose, because along a certain valley sloping to the Connecticut River lay a series of ponds connected by a winding stream.

—From *Grandma Called It Carnal*, copyright, 1938, by Bertha Damon. Reprinted by permission of Simon and Schuster, Publishers.

So dams had been built and shops, as we called them, strung at intervals along this extensive watercourse. Even though it was a manufacturing town, it was green, pleasant, quiet, rural. The reason for this was that the factories were small and far apart and they were run exclusively by water power, water being in those days clean. Smooth green hills and wooded ones, the still ponds and running streams, and many great old trees gave variety and a private beauty. Scattered all through were gray stone walls and high rocky pastures.

The streets, elm-shaded, had an air of dignity and retirement. The houses were kept startlingly well painted—for your true New Englander, whatever else he may deny himself, is extravagant with paint if not with pigment. There were perhaps a hundred houses with a century or more to their credit; several of these were beautiful "mansions," but most were merely large, plain, and of a satisfactory mass. There were two or three Greek Revival houses with pillars from ground to cornice; several Victorian Gothic, tall and peaked, self-conscious with corner towers and yards of wooden crocheting on gables and colored glass in front doors; and very many houses that confessed the eighties and nineties all over their wrong proportions, pale yellow clapboards, awkward windows, and fancy porches.

The shades of almost every dwelling, upstairs and down, were usually kept drawn, the front door locked. All looked orderly and cold-hearted.

As a child, I never realized that town as a town. I don't think it was by anyone then so realized. It was not a unit; it had no community-mindedness. It seemed a group of unrelated clans, some indifferent, some hostile to each other. Each clan held fast by its own family, own religion, own economic interests, and by those almost exclusively.

Such slight social solidarity as North Stonefielders may be said to have had seemed to be based on a dichotomy: pride in being North Stonefielders in general and contempt for fellow North Stonefielders in particular; the conviction that though its individual parts were in large measure contemptible they added up to a sum total of grandeur.

North Stonefield thought itself somehow especially and commendably American. Is it true that the smaller, more insular, more backward a group is, the more it prides itself on being one hundred per cent American and makes its brag proportionate? North Stonefield had been settled at a time when America was still new enough to justify extravagant hopes, hopes which had left a sort of inflation in the village mind. In that early time all true Americans were prophesying that for the United States of America perfection was just around the corner. Let the Republic go on a little further on the way it was going. The chief difference between those early patriots and the village thinkers of Grandma's day was that ours were not pressing toward perfection in a future, however immediate. Ours felt that they were just about all right as they were then and there. Especially there.

The feeling in the North Stonefield mind toward anything not American amounted to contempt, except when it was mere indifference. North Stonefield was born knowing that any part of the United States was superior to any part of Europe taken at random, and to all Asia and Africa, of course; and that any member of one of its churches knew more truly the values of life here and hereafter than any of the "heathen" thinkers of China and India—better not call the likes of them philosophers! It never forgot that England was the greatest empire in the world and we Americans had licked her, by golly!—licked her with one hand tied back of us, so to speak. North Stonefield therefore felt more than reasonably sure that America "could lick creation."

Any foreigners, who had perhaps come to realize the superiority of North Stonefield civilization and sought to dwell amid its blessings, were made most unwelcome. On one edge of the town was a small group of Irish folk. They certainly did not "belong." One night one of their houses got afire and two men in it burned to death. "Serves 'em right for bein' Irish," said one of our townsmen with a name of meritorious "American" sound, and no townsman could be found to gainsay him. There was an enterprising Italian from whom fresh fruits and vegetables might be bought—but only by his fellow countrymen. Since the native purveyors of North Stonefield lacked gumption to provide it with such, it went without. It would not deal with a "Dago" and "encourage" him.

So great was North Stonefield exclusiveness that all who were "from away," who came, that is, from some other state or even from another part of our state, were regarded as foreigners of a sort and were received as possible equals only gradually. Really "to belong," your great-grandfather must have been a North Stonefielder and the history of all his descendants an open book to the townsfolk. The converse of this proposition was true. If a North Stonefielder went away to some other place to live where North Stonefield couldn't "keep track" of his behavior, he or she—especially she—was regarded with overt suspicion. It was naturally felt that no one could be trusted to lead a moral life when released from the social pressure of North Stonefield.

"What's become of Nellie Ellis, she 'twas, that used to live on the Sawmill Road near the George Graham place and then went and moved to Boston?" they would question, with heavy accent on the "become" as if no very good answer could be expected.

Moreover, the outskirts of our own town were not esteemed quite so desirable as the central part, nor the people who lived in them so worthy as we. The phrase "Out West" did not mean Kansas or California, but the West District, which was some four miles from our "Cove" or business center. The people who lived in this "Out West" seemed aliens, whose ways were not our ways. Their being further off from the New York, New Haven, and Hartford Railroad than we and without stores and churches of their own, having to make fearsome Saturday night and Sunday morning voyages in buggies to us for food, both material and spiritual, made them seem outlandish. One could not help feeling that their way of life was frontier and ours with its easy privilege of walking after a bag of salt and getting back with it inside an hour and a half really urban.

In the accepted North Stonefield set each man was exactly as good as another and felt himself to be better, and no woman admired her neighbor—not oppressively, that is. Only one woman in town kept a "hired girl"—and note the democracy of that phrase; not the servile badge of cook or servant, merely girl and hired. We did not envy the woman who kept the hired girl, nor were we awed. On the contrary. We just wondered what Mrs. Wentworth could be doing with all her time; we thought we women who could get along without having to call in help from outside considerably smarter and not a little more estimable.

The numerous small factories were usually each owned by a man who worked in them at the same tasks as the men he hired.

Steel and ivory brought from afar were turned out as augers and buttonhooks, piano keys and manicure sets, the latter chiefly used as Christmas presents and seldom otherwise. Almost every man in the village worked in the factories except the few that were doing the storetending or schoolteaching or such like for the others. Many of the women of good family worked too, some "steady" and others from time to time, and no social stigma attached. In fact, you were considered admirable and thrifty if it was so that your menfolks could be looked out for all right and still you could manage time to earn enough to pay for some illness or to lay by for a rainy day. If ever there was an industrial democracy it was our town.

It was so natural and fervent a democracy indeed that practically everyone was called by the Christian name. England, of course, was full of Squires and Sirs and America's own South full of Colonels, but by our very licking of those sections we had shown their inferiority to us and we would be something different. The terms Mr. and Mrs. could hardly be tolerated; they implied too much kowtowing—that persons so spoken of were "better'n we are." The only Mr.'s and Mrs.'s were a few newcomers, particularly if they might be of considerable "substance," also the minister and his wife—not that these latter were revered, mind you, but that they were always comparatively new. Grandma, for some reason was always Mrs. except to relatives. Just as in the young French Republic after the Revolution all titles were abolished and each was called Citizen or Citizeness, so most of us in our fierce equality were Bill or Mattie, with no handles.

North Stonefielders refused to accord what may be called nominal respect. Not only were the titles Mr. and Mrs. scarce, but Christian names were leveled down into nicknames. A dignified name like Adelaide or Elizabeth was turned for life into Addie or Lizzie; about the only time your dignified name was used would be at your christening or at your funeral. And you never had christenings.

More regrettable still, any noble name that sounded a little like something ignoble was promptly corrupted. In the South District school was a boy named Eustace; of course, that boy was never to hear any appellation but "Useless." Likewise, any personal peculiarity was promptly immortalized in a contemptuous nickname. "Fatty," "Skinny," "Popeye" were dishonorary degrees freely conferred, and one of our citizens was called through life "Skunk" Baldwin—why, probably his best friends wouldn't tell him; and there was "Pimp" Nelson, pimp in North Stonefieldese meaning undersized, unimpressive.

Perhaps the reason why swearing was such a satisfaction—to men only, of course—was that it was a way of nicknaming even God, of not letting him be on too high a horse all the time.

A most striking thing about North Stonefield was its joylessness. Its citizens did not know how to be happy; they thought they did not want to know; of happiness they had a fundamental distrust. The old Puritan hymn

I always feel temptation nigh
When I delight do feel. . . .

was not in their hymnal but was in their code. What influence was it—John Calvin—hard climate—stingy soil—that for long years combined to make soberness, not to say glumness, the characteristic complexion of that as of many New England settlements?

Any sign of happiness, of gaiety, was to the North Stonefield eye suspicious. Great-Uncle Samuel, who lived in a lonely spot near the Old Place, called for some forgotten reason "Bokum," was reputed to look upon the wine when it was red—or any good color. One day I overheard the two men who were making Grandma's hay:

"Wal, Sam Griswold was drunk agin last night!"

"How d'yer know? Did yer see him?"

"Nope, didn't have ter. I heard him sure nuff. He was drunk all right, for he was on the way home ter Bokum 'n' he was *singin'!*"

Such laughter as North Stonefield generally indulged in was not happy laughter. It had an animus; all jokes were "on" someone. One great classic joke of the town, for instance, retold with many a covert wink or overt haw-haw, was the one about Nellie Sloan's funeral. As a child I could never see why this joke was so funny as my elders and betters thought. Nellie was a pretty woman, taking pains to stay pretty, who lived "Out West." She seemed to know a great many men; they were always calling on her. It was rumored that some of our best citizens, ordinarily very Baptist, commendably conjugal, could hardly be trusted to get their horse by Nellie's door when they were hauling a load of witch hazel or firewood in her neighborhood.

But Nellie got tired of this popularity and all that it entailed, and one day she was found in a near-by swamp, face down, quite dead. She left a will. Its object was not primarily to dispose of her effects, but to nominate the eight men who had known her best as pallbearers at her funeral. Among her other attractions Nellie must have had a merry wit. I can tell you that list of eight names made a stir in the town. Business conditions, for one thing, seemed to be brisker, because no less than seven men left town at once, on business. But young Bert Haskins stayed.

"In life it seems you took the good of Nellie," his father said, "and now she's dead, by Heaven, you've got to mourn her! Handle number one on the right of the casket is yours!"

And it was. That was the very funniest, biggest, most lasting joke North Stonefield ever had.

Neither in its laughter nor in its labor was North Stonefield happy. It had not learned that one secret of happiness is to have some form of work that seems to the doer creative. Work our townspeople had aplenty, but it did not seem to them creation; it seemed drudgery.

For adults, North Stonefield considered hobbies, amusements, and sports both unnecessary and foolish. There were but three places, not counting the church, where men might meet together: the North Stonefield House, which had a bar, Deacon Parker's General Store, and the Post Office. Of course, because there was a bar, only semi-outcasts went to the North Stonefield House. That left the General Store and the Post Office as places in which the unco guid might seek social dissipation. Parker's was pretty respectable. It had a central stove with chairs around it, and more or less decorous boxes of sawdust. Of course no female went there except in the daytime, for evenings it became the village equivalent of the Union League Club. But one didn't have excuse to go for supplies as often as for mail, so *the* Post Office was the place. It was there menfolks congregated most of all and "hung round" longest; there they indulged in their male vices: smoking pipes, chewing, worst of all—spitting. There gossip swelled like the Cove in freshet time and swept away many an insecurely rooted reputation.

As these three magnetic centers were all in the business district known as "the Cove" because it was located on the banks of that part of the stream so designated, "gone down to the Cove" said by the women of their menfolks was frequently a term of censure or regret.

A few of the men had a little fun with their fife-and-drum corps. They met once a week in the upstairs of the North Stonefield House for evening rehearsal—and other considerations. On public occasions they came out, somewhat sheepishly but with inflated chests, in light-gray uniforms with gold stripes down the legs, and cocked hats trimmed with molted ostrich. The outfit with gold epaulets thrown in cost five dollars and a half, which was generally considered too much for mere idle pleasure. The corps seemed to me far from idle; the drum major was wonderful; he dazzled me so that I can't remember his doings—only his dazzle. The men played mostly by ear; the public heard in the same way.

Even the young folks of pious families in North Stonefield were rather "put to it" for evening entertainment. Cards were wicked; dancing was immoral; theater did not exist. Games were played a good deal; but for group activity checkers, dominoes, and "authors" furnish no great hilarity, so the main standby was kissing games. These were not disapproved, perhaps because in the nature of the case such kisses as were current were not a pleasure but more of an ordeal.

Alice and I didn't like kisses then and didn't do them well. She was allowed to go to parties when she was fourteen, but I was kept back.

"What kind of a time did you have?" I asked, all curiosity after she had graced an occasion at Ernest Morgan's one evening.

"Just like Job's," she said bitterly.

"What about Job?"

"'The young men saw me and hid themselves,'" she admitted. And that was all I could get out of her.

Discussion

1. What is the author's attitude toward her town? Might she have had a different attitude? Explain.
2. Explain why the selection gives an impression of unity.

3. How many topic ideas about the town are presented? What paragraphs are devoted to each?
4. Are there any other important aspects of life in a town or village which are not treated here? What are they?
5. Could the ideas in the selection have been given in a different order without loss of effectiveness? Can you propose another effective order of presentation?

Writing

Write a theme showing the characteristics of life in the community in which you grew up. Confine yourself, as Bertha Damon does, to the characteristics that have impressed you most. Your account can, of course, be either favorable or unfavorable to your community.

STEWART H. HOLBROOK · *"You Are a Cheap Cad," He Said*

There died in San Diego, California, one day not long ago, a tall, white-maned old gentleman listed in the telephone directory as Gilbert Patten. He was almost eighty, and he had long outlived his day, for to millions of middle-aged Americans he was Burt L. Standish, creator of the peerless Frank Merriwell, and Frank had died a long time before. I can think of no other fictional characters so real to my generation as those who peopled the Merriwell saga.

Today's sons and grandsons have never heard of the Merriwell boys, for they are deader even than the Alger heroes, and several attempts at resuscitation proved dismally futile. Yet the Merriwell story called for 208 books, and their total printings, as nearly as can be ascertained, ran to 125,000,000 copies. That would put them up, or down, into the Horatio Alger class. Their heyday came near the end of the Alger period. For eighteen years first Frank, then his younger brother Dick, lived, breathed, and won games for Yale College, and spurned the unspeakable Harvard

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—From *The Saturday Review of Literature,* October 13, 1945. Reprinted by permission of *The Saturday Review* and Stewart H. Holbrook.

cads as they did alcohol, cigarets, and coffee. I am a little surprised that the great university in New Haven never saw fit to grant an honorary degree to the non-Eli who gave Yale more favorable publicity than did any of its graduates.

Although I never got to Yale, my heart was set on going there and my reason was not William Graham Sumner, nor Billy Phelps, nor even Ted Coy. It was because Frank Merriwell had been a student there. I knew, of course, that the Merriwell stories were fiction and that fiction was somehow or other not really true, yet I could not get out of my mind that somewhere there simply must be a genuine Frank Merriwell, complete with keen gray eyes, strong chin, muscles of steel, and a heart of gold. And fearless too!

"You are a cheap cad," Frank told the big overdressed bully. That bully was a Harvard cad, too. Almost any volume of the Merriwell series was a libel on Harvard and all it contained.

Frank Merriwell first appeared in 1896, in Tip-Top Weekly, a five-cent "dime novel" established specifically for the Merriwell saga by the venerable firm of Street & Smith, New York. In that first story Frank was a student at a fictitious preparatory school named Fardale Academy. He seemed, then as later, to be often suffering from sprained ankles, broken hands, and one thing and another, but he was always ready with the three-base hit in the ninth inning, no matter how dreadful the injury. Going on to Yale in due course, he naturally became the finest athlete there, and there, in addition to more sprained ankles, he had to contend with the crooked men of Harvard, and to lesser degree the crooked men of Brown, Amherst, Dartmouth, and other lowlife and gangster-ridden colleges, all of whom were bent on getting Frank drunk, or drugged, or kidnapped just before the Big Game, either football or baseball. Or, they might simply try to bribe him to throw the contest. It was all the same in the end, and the end was a glorious Yale victory over the slimy imps of Cambridge or wherever, and against practically insuperable odds.

When by the very nature of college, Frank at last had to leave Yale—taking all of the scholastic honors at graduation—Dick Merriwell was about to enter good old Fardale Academy. Dick followed more or less in his brother's footsteps, although he was never quite so popular, even though he pitched with either hand and the bewildered batters never knew which way the ball would curve;

whereas Frank, a straight right-hander, had to get along as best he could with a ball that merely leaped a foot above its natural trajectory just as the batter took swing. Incidentally, more than one youth of my generation like to have thrown his arm from its socket in attempts to get a baseball to jump like a startled rabbit in the Frank Merriwell manner.

Both Merriwells, you may be certain, performed as fullbacks on the gridiron. They stroked the varsity crews. In field and track, either of the Merriwell boys commonly entered in the 100-yard dash, the quarter mile, the mile, pole vault, the broad and high jumps, and the weight throwing. If at the last minute some slicker added a discus throw to the program, thinking thus to beat a Merriwell in one event, Frank picked up the big plate, cuddled it a moment in his arm, then tossed it to hell and gone.

No, sir, there was just no stopping the Merriwell boys. When both had finally emerged from college, they went around the world with a baseball team, doing a little big-game hunting on the side, being captured by savages, and having other adventures. Accompanying them, in school and out, were a set of characters whose names are sure to light up the eye of graying Americans today. Harry Rattleton (he stuttered), Ephraim Gallup (Vermont farm boy), Barney Mulloy (with full Hibernian accent), Bart Hodge, Bruce Browning—these were as real to us as Frank himself. Nor was Frank wholly without biological urge. One week it was dark Inza Burrage, again it was blonde Elsie Bellwood. (Frank went so far as to "embrace" them.) Looking back on those love affairs, it would seem that Frank played the two girls against each other for the best part of eighteen years. At last they married. I forget Dick's girl, but Frank married the handsome Inza, at about the time World War I got under way. Interest in the Merriwell boys petered out with tragic swiftness. By the end of the war they had been forgotten.

The Merriwells' creator was born Gilbert Patten in 1866, in Corinna, Maine. His father wanted him to be a carpenter and thus earn the stupendous wages of $2.50 a day. Young Gil wanted to write, and he was barely seventeen when he sold his first short story, "A Bad Man," to Beadle & Adams of New York for six dollars. He never wrote another short story. His next effort was a short novel, for which he received a check for seventy-five dollars. His next was a bit longer and brought one hundred and fifty dollars, and he became a regular contributor to the Beadle & Adams tripe factory.

For the next twelve years he ground out a 20,000-word novel a week for the house, chiefly Westerns. He moved to New York for a while, and made a trip through the Far West. In 1895 he returned to Maine and settled down in Camden. Here in that year he received a long letter from O. G. Smith, president of Street & Smith, just then engaged in taking the dime-novel field away from Beadle, asking him to consider a new series built around an American youth attending a preparatory school, who should finally go to college. The basic idea was a type of story which should inspire American youth to high ideals in the field of sport and life generally.

Patten told me, in his old age, that the moment he got the letter from Smith he knew that this was to be his field. He had long since tired of the absurdities of the Western story and was ready for absurdities in some other line. He wrote Smith, agreeing to turn out a 20,000-word story a week for fifty dollars. "Frank Merriwell; or, First Days at Fardale" was the first story. It must have been the answer to Mr. Smith's prayer for something to print. For the next decade and a half S & S printed Tip-Tops by the million; and every little while they reset the Merriwell stories in smaller format and put two of them together to make a volume in the Medal Library, price ten cents.

Tip-Top Weekly was grouped, in the ignorant minds of preachers and school teachers of the time, with the other so-called dime novels, like Nick Carter Weekly, Jesse James Weekly, Young Wild West, and Buffalo Bill. This was not fair, for Tip-Top stood alone. It also stood for all manly attributes, less alcohol, tobacco, and unorthodox amour, which were banned not because they were immoral of themselves, but because they prevented an athlete from doing his best.

> "I do not use liquor," Frank's voice remained on an even keel, "and I will thank you to put away that flask. Don't you know that you can't drink *that* and play good baseball?"

Tip-top should have been excepted from the general run of dime novels. No boys ran away from home, or tried to hold up a passenger train from anything suggested in the Merriwell series. And in time most parents came to recognize the divergence, and

Tip-Top was brought into the parlor from the hay-mow. Patten told me he had received at least 50,000 letters, many from parents, commenting on the fine qualities of the Merriwell boys.

When the Merriwells finally were done, Patten tried to follow with a Cliff Sterling. Cliff got the brush-off; the kids wouldn't have him. Nor would they accept a Rex Kingdon. So, Patten edited a pulp magazine successfully for a few years. He wrote a play much used by amateurs. He tried again to hit the juvenile fancy by dredging up a Frank Merriwell Junior. But the old magic had gone. It had gone, too, when the movies made a Merriwell series; and when radio tried out the former great Yale athlete. Then, in 1941, Patten brought out a full-length book, "Mr. Frank Merriwell," in which the original Frank was brought down to date as a middle-aged citizen. Few people bought or read it.

When I knew him, Mr. Patten was in his early seventies. Tall and tanned, of rugged build, his great leonine head would have made a superb model for the head of a Mountain Man, or a Pioneer. He seemed always to be in good humor, and if he ever complained because a new generation would not accept his wares, I never heard him. His sense of humor was immense; and, with a Maine accent untouched by forty years of living in all parts of the United States, he could tell Down East stories that had the full and the genuine flavor.

The last time I saw him, I asked the old gentleman why his later stories did not catch on. He knew the answer. "It was," he said, "because I was too old to know what sort of youth the present younger generation admires and looks up to. I tried to find out, but never did. And I don't know yet."

Discussion

1. What is the author's attitude toward the Merriwell books? How does he emphasize his attitude?
2. Judging from Mr. Holbrook's discussion, what were the weaknesses of the Merriwell stories?
3. Show that irony is one of the chief means of criticizing the stories.
4. Make a brief outline of the article.

Writing

Write a composition on the type of reading matter you enjoyed in your earlier years.

PEARL S. BUCK · *A Debt to Dickens*

I have long looked for an opportunity[1] to pay a certain debt which I have owed since I was seven years old. Debts are usually burdens, but this is no ordinary debt, and it is no burden, except as the feeling of warm gratitude may ache in one until it is expressed. My debt is to an Englishman, who long ago in China rendered an inestimable service to a small American child. That child was myself and that Englishman was Charles Dickens. I know no better way to meet my obligation than to write down what Charles Dickens did in China for an American child.

First, you must picture to yourself that child, living quite solitary in a remote Chinese countryside, in a small mission bungalow perched upon a hill among the rice fields in the valleys below. In the near distance wound that deep, treacherous, golden river, the Yangtse, and some of the most terrifying and sinister, as well as the most delightful and exciting moments of that child's life, were spent beside the river. She loved to crawl along its banks upon the rocks or upon the muddy flats and watch for the lifting of the huge four-square nets that hung into the moving yellow flood, and see out of that flood come perhaps again and again an empty net, but sometimes great flashing, twisting silver bodies of fish. She lingered beside villages of boat folk, and saw them live, the babies tied to a rope and splashing in the shallower waters. But she saw babies dead thrown into the deep waters. She wandered small and alien among the farm folk in the earthen houses among the fields. She accepted a bowl of rice and cabbage often at meal time and sat among the peasants on the threshing floor about the door and ate, usually in silence, listening and listening, answering their kindly, careless questions, bearing with shy, painful smiles their kind, teasing laughter at her yellow curls and unfortunate blue eyes, which they thought so ugly. She was, she knew, very alien. Upon the streets of the great city where sometimes she went she learned

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— From *The Saturday Review of Literature,* April 4, 1936. Copyright 1936 by Pearl S. Buck. Reprinted by permission of *The Saturday Review* and the author.

[1] The article was occasioned by the hundredth anniversary of the first instalment of *Pickwick Papers.*

to accept the cry of foreign devil, and to realize she was a foreign devil. Once when she was very very small, before she knew better, she turned as worms will, and flung back a word she had learned among the boat folk when they quarrelled. It was a word so wicked that the youth who called her foreign devil ran howling with terror, and thereafter she went more contentedly, not using the word any more because of its great wickedness, but knowing she had it to use if she needed it very much.

She grew from a very tiny child into a bigger child, still knowing she was alien. However kindly the people about her might be, and they were much more often kind than not, she knew that she was foreign to them. And she wondered very much about her own folk and where they were and how they looked and at what they played. But she did not know. In the bungalow were her parents, very busy, very, very busy, and when she had learned her lessons in the morning quickly, they were too busy to pay much heed to her and so she wandered about a great deal, seeing and learning all sorts of things. She had fun. But very often she used to wonder, "Where are the other children like me? What is it like in the country where they live?" She longed very much, I can remember, to have some of them to play with. But she never had them.

To this small, isolated creature there came one day an extraordinary accident. She was an impossibly voracious reader. She would like to have had children's books, but there were none, and so she read everything,—Plutarch's "Lives" and Fox's "Martyrs," the Bible, church history, and the hot spots in Jonathan Edwards's sermons, and conversations out of Shakespeare, and bits of Tennyson and Browning which she could not understand at all. Then one day she looked doubtfully at a long row of somber blue books on a very high shelf. They were quite beyond her reach. Later she discovered this was because they were novels. But being desperate she put a three-cornered bamboo stool on top of a small table and climbed up and stared at the bindings and in faded black titles she read "Oliver Twist," by Charles Dickens. She was then a little past seven years old. It was a very hot August day, in the afternoon about three o'clock, when the household was asleep, all except the indefatigable parents, and they were very, very busy. She took "Oliver Twist" out of his place—it was fat and thick, for "Hard

Times" was bound with it—and in great peril descended, and stopping in the pantry for a pocket full of peanuts, she made off to a secret corner of the veranda into which only a small, agile child could squeeze, and opened the closely printed pages of an old edition, and discovered her playmates.

How can I make you know what that discovery was to that small, lonely child? There in that corner about the country road in China, with vendors passing beneath me, I entered into my own heritage. I cannot tell you about those hours. I know I was roused at six o'clock by the call to my supper, and I looked about dazed, to discover the long rays of the late afternoon sun streaming across the valleys. I remember twice I closed the book and burst into tears, unable to bear the tragedy of Oliver Twist, and then opened it quickly again, burning to know more. I remember, most significant of all, that I forgot to touch a peanut, and my pocket was still quite full when I was called. I went to my supper in a dream, and read as late as I dared in my bed afterward, and slept with the book under my pillow, and woke again in the early morning. When "Oliver Twist" was finished, and after it "Hard Times," I was wretched with indecision. I felt I must read it all straight over again, and yet I was voracious for that long row of blue books. What was in them? I climbed up again, finally, and put "Oliver Twist" at the beginning, and began on the next one, which was "David Copperfield." I resolved to read straight through the row and then begin at the beginning once more and read straight through again.

This program I carried on consistently, over and over, for about ten years, and after that I still kept a Dickens book on hand, so to speak, to dip into and feel myself at home again. Today I have for him a feeling which I have for no other human soul. He opened my eyes to people, he taught me to love all sorts of people, high and low, rich and poor, the old and little children. He taught me to hate hypocrisy and pious mouthing of unctuous words. He taught me that beneath gruffness there may be kindness, and that kindness is the sweetest thing in the world, and goodness is the best thing in the world. He taught me to despise money grubbing. People today say he is obvious and sentimental and childish in his analysis of character. It may be so, and yet I have found people surprisingly like those he wrote about—the good a little less undiluted, perhaps, and the evil a little more mixed. And I do not regret that simplicity of his, for it had its own virtue. The virtue was a great zest for life. If he saw everything black and white, it was because life rushed out of him strong and clear, full of love and hate. He gave me that zest, that immense joy in life and in people, and in their variety.

He gave me, too, my first real glimpse of a kindly English God, a sort of father, to whom the childlike and the humble might turn. There was no talk of hell in his books. He made Christmas for me, a merry, roaring English Christmas, full of goodies and plum puddings and merriment and friendly cheer. I went to his parties over and over again, for I had no others. I remember one dreadful famine winter the thing that kept me laughing and still a child was "Pickwick Papers." I read it over and over, and laughed, as I still laugh, over the Wellers and the widow and Mr. Pickwick and all his merry company. They were as real to me as the sad folk outside the compound walls, and they saved me.

And he made me love England. I have no drop of English blood in my veins. I have German and Dutch and French ancestors, I was born in the United States of American parents, and I have spent my life in China. But part of me is English, for I love England with a peculiar, possessing love. I do possess something of England. When I went there years later, London was my city and the countryside I knew. I was not strange. The people were my own people, too. England is the mother of a certain part of my spirit. I can never take sides against England or the English. It is not only that we speak a common tongue and that we are the same race. There is far more than that. I know English people. I love English people. I have grown up among them. I am used to them. They have been my companions for many years. They are forever my friends. When several years ago in China there was a period of misunderstanding of certain British policies, I steadfastly refused to agree with the distrust expressed by some of my Chinese friends toward England. I was sure of the quality of the English people and of their integrity. What they said they would do, they would do. And they did. Their armies were peacefully withdrawn when the necessity of protection was over, they did not proceed to the conquest the Chinese thought was inevitable, and more than any Western power they have steadily shown their honesty of purpose toward the Chinese. After it was over, my Chinese friends said wondering, "You were right." And I replied, "I knew I was."

This is what Charles Dickens did for me. His influence I cannot lose. He has made himself a part of me forever.

SECTION 2 · *Toward Education*

WILLIAM TRUFANT FOSTER · *Study and Success*

1 Is high scholarship worth the effort? In other words, have colleges devised courses of study which bear any relation to the probable careers of their students? Is there any evidence that a man who attains high marks is more likely to achieve success after graduation than a man who is content with passing marks?

2 If there is any such connection between success in studies and success in life, it should be possible to measure it by approved statistical methods, and thus arrive at conclusions of more value as guidance to the undergraduate than the opinion of any man. Both the professor and the sport are in danger of arguing from exceptional instances—each is likely to find striking cases in proof of his preconceived notions; each is inclined to scorn the opinion of the other.

3 But conclusions drawn from large numbers of cases, not subject to invalidating processes of selection, and employing terms that are adequately defined for the purpose at hand, must command the respect of all men. If such conclusions do not support the contention that it pays to study, there is something radically wrong with the professor's part of college affairs; different kinds of achievement should receive academic distinction and new tests should be devised. If, on the other hand, present standards for rating students predict their future success with any degree of accuracy, the facts should be discovered and used everywhere to combat the prevalent undergraduate opinion. Whatever the outcome of such studies, we should have them in larger numbers, in many places, protected by every safeguard of scientific method. We may well ask, first, whether promise in the studies of one period becomes performance in the studies of a later period.

4 Are good students in high school more likely than others to become good students in college? Prof. Walter F. Dearborn tried to answer that question for the State of Wisconsin. He compared the records of hundreds of students at the University of Wisconsin with their records in various high schools. He found that above eighty

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——From William T. Foster, "Should Students Study," *Harper's Monthly*, September, 1916. Reprinted by permission of the author.

per cent of those who were in the first quarter of their high school classes remained in the upper half of their classes throughout the four years of their university course, and that above eighty per cent of those who were in the lowest quarter in their high school classes failed to rise above the line of mediocre scholarship in the university. The parallelism is so striking that we are justified in concluding that, except in scattering cases, promise in the high school becomes performance in the college. Indeed, only one student out of nearly five hundred in this investigation who fell among the lowest quarter in the high school attained the highest rank in the university. Of course, a boy may loaf in high school and take his chance of being the one exception among five hundred. But he would hardly be taking a sporting chance; it would be rather a fool's chance. The risk would be less in going over Niagara Falls in a barrel.

5 The University of Chicago found that high school students who failed to attain an average rank higher than the pass~~ing~~ mark, by at least twenty-five per cent of the difference between that pass~~ing~~ mark and one hundred, failed in their college classes. The faculty therefore decided not to admit such students. Exceptions were made of the most meritorious cases, but few of these exceptions made satisfactory records in the college.

6 Basing its policy upon such evidence as this, Reed College . . . decided to admit, as a rule, only students who ranked in the first third of their preparatory-school classes. Some exceptions have been made. Twenty per cent of those admitted were known to be below the first third, and two per cent below the median line. In all cases these candidates were regarded as the most promising of those who fell below the first third in high school rank, yet almost without exception they have failed to rise above the lowest quarter of their college classes. Thus, it appears that in Oregon, as in Wisconsin and Illinois, those who get the best start in the lower schools maintain their advantage in the upper schools; few of their classmates overtake them.

7 But why strive for high rank in college? Why not wait for the more "practical" studies of the professional school? Hundreds of boys the country over declare today that it makes little difference whether they win high grades or merely passable grades in the liberal arts, since these courses have no definite bearing on their

intended lifework. Almost invariably they are ready to admit that they must settle down to serious effort in the studies of law, medicine, engineering—that is to say, in professional schools. Even the sport who makes the grade of mediocrity his highest aim as a college undergraduate, fully intends to strive for high scholarship in his professional studies. Does he often attain that aim? That is the question.

8 And that, fortunately, is a question we may answer with more than opinions. We may take, for example, all the students who graduated from Harvard College during a period of twelve years and entered the Harvard Medical School. Of the 239 who received no distinction as undergraduates, 36 per cent graduated with honor from the Medical School. Of the 41 who received degrees of A.B. with high honor, more than 92 per cent took their medical degrees with honor.

9 Still more conclusive are the records of the graduates of Harvard College who during a period of twenty years entered the Harvard Law School. Of those who graduated from college with no special honor, only 6½ per cent attained distinction in the Law School. Of those who graduated with honor from the college, 22 per cent attained distinction in the Law School; of those who graduated with great honor, 40 per cent; and of those who graduated with highest honor, 60 per cent. Sixty per cent! Bear that figure in mind a moment, while we consider the 340 who entered college "with conditions"—that is to say, without having passed all their entrance examinations—and graduated from college with plain degrees. Of these men, not 3 per cent won honor degrees in law.

10 If a college undergraduate is ready to be honest with himself, he must say, "If I am content with mediocre work in college, it is likely that the men in my class who graduate with honor will have three times my chances of success in the Law School, and the men who graduate in my class with highest honor will have nearly ten times my chances of success." So difficult is it for a student to change his habits of life after the crucial years of college that not one man in twenty years—not one man in twenty years—who was satisfied in Harvard College with grades of "C", and lower gained distinction in the studies of the Harvard Law School.

11 The same relation appears to persist between the promise of Yale undergraduates and their performance in the Harvard Law

School. If we divide the 250 graduates of Yale who received their degrees in law at Cambridge between 1900 and 1915 into nine groups, according to undergraduate scholarship, beginning with those who won the highest "Senior Appointments" at Yale and ending with those who received no graduation honors, we find that the first group did the best work in their studies of law, the second group next, the third group next, and so on, in the same order, with but a single exception, to the bottom of the list. The performance at Harvard of each of the eight groups of Yale honor graduates was in precise accordance with the promise of their records at Yale.

12 Apparently the "good fellow" in college, the sport who does not let his studies interfere with his education, but who intends to settle down to hard work later on, and who later on actually does completely change his habits of life, is almost a myth. At least his record does not appear among those of thousands of students whose careers have been investigated under the direction of President Lowell and others. It seems that results are legal tender, but you cannot cash in good intentions.

13 "Dignified credit to all," cries the billboard. "Enjoy your new suit now, and pay for it later." Many a boy, lured by the installment plan, expects to get an education on deferred payments in effort, only to find that there is no credit for him, dignified or otherwise. What his honest effort has paid for in full is his today; nothing more by any chance whatever.

14 But why strive for the highest standing in professional school? Let us pursue the inquiry one step further. Let us ask whether success in studies gives promise of success in life. As far as the study of law is concerned, we may answer at once that the known success of the honor graduates of the Harvard Law School is one reason why even college undergraduates at Cambridge believe that law students should study law—hard and seriously. For the same reason, leading law offices the country over give preference to honor graduates of law schools.

15 But what is success in life? That is the first problem. It is one difficulty that confronts everyone who attempts to speak with certainty about the meaning of education. There is no accepted definition of the aim of education. The philosopher has been likened to a blind man in a dark cellar hunting for a black cat that isn't there.

The aim of education seems as elusive as the proverbial black cat. Nevertheless, we do not close our schools. We strive for concrete ends, such as proficiency in handwriting, aware that any particular end may soon be regarded as not worth the effort to attain it. Until recently we could not say even what we meant by proficiency in handwriting, for we had not attempted to define our aim or devise a measure of our progress toward it. We still speak of educational processes and results about as accurately as the Indians spoke of temperature. We still speak of the science of education without seeming to understand that there is no science without precise measurement. From our fragmentary beginnings to an adequate science of education is a long journey, and the road is beset with difficulties. While we struggle along this road, generations will come and go. We will help them to attain what seem, for the time, the proper aims of education. And each individual will strive for what seems to him success in life.

16 As one measure of success in life, we may take the judgment of certain men. In so far as we accept their judgment our findings concerning the relation between college studies and this kind of success will seem important to us. Here, as in most questions of educational aim, we can do no better for the present than take the consensus of opinion of competent judges.

17 Using this measure for success, I endeavored to find out whether the members of the class of 1894 of Harvard College who had become notable in their lifework had been notable in their studies. I therefore asked three judges to select, independently, the most successful men from that class. I chose as judges the dean of the college, the secretary of the Alumni Association, and a professor in Columbia University who is a member of the class, because I thought that these men came nearer than any others to knowing all members of the class. I left each judge free to use his own definition of success, but I asked them not to select men whose achievements appeared to be due principally to family wealth or position. The judges agreed in naming twenty-three successful men. I then had the entire undergraduate records of these men accurately copied from the college records and compared with the standing of twenty-three men chosen at random from the same class.

18 The result was striking. The men who were thus named as most successful attained in their college studies nearly four times as

many highest grades as the random selection. To the credit of the successful men are 196 "A's"; to the credit of the other men, only 56.

19 Following a similar plan, three judges selected the most successful men among the graduates of the first twenty-four (1878–1901) classes from the University of Oregon. An examination of the scholarship records of these men showed that 53 per cent had been good students and 17 per cent had been weak students. Of the graduates who were not regarded as successful, 52 per cent had been weak students and only 12 per cent had been good students.

20 Similar results have been found by Prof. A. A. Potter, Dean of the Kansas State Agricultural College, in an unpublished study of the relationship between superiority in undergraduate scholarship and success in the practice of engineering as indicated by salaries received. The Director of the School of Forestry of Yale University has collected evidence of the same kind in an unpublished study of the graduates of the Yale School of Forestry. It appears that about ninety per cent of the men who have had conspicuous success in the field of forestry were among the better students in their professional studies. President Thwing of Western Reserve University, the historian of higher education in America, says that he has found no exception, in the records of any American college, to the general rule that those who achieve most before graduation are likely to achieve most after graduation.

21 The list of the first ten scholars of each of the classes that graduated from Harvard College in the sixth decade of the last century, as presented by William Roscoe Thayer, is a list of men eminent in every walk of life. Indeed, it is likely that the first quarter in scholarship of any school or college class will give to the world as many distinguished men as the other three quarters.

22 What can we say in this connection of the 420 living graduates of the ten Wesleyan University classes from 1890 to 1899? Just this: Of the men in that group who graduated with highest honors, 60 per cent are now regarded as distinguished either by *Who's Who in America* or by the judgment of their classmates; of those who were elected to Phi Beta Kappa—the scholarship society—30 per cent; of those who won no superior honors in scholarship, only 11 per cent. Of the men now living who graduated from Wesleyan University between 1860 and 1889, 16 per cent are listed in *Who's Who;* of those who received high honors in scholarship during this

period, 50 per cent; of those who attained no distinction as scholars, only 10 per cent.

23 From the records of 1,667 graduates of Wesleyan University, Professor Nicholson concludes that of the highest-honor graduates (the two or three leading scholars of each class) one out of two will become distinguished; of Phi Beta Kappa men, one out of three; of the rest, one out of ten.

24 Concerning the value of *Who's Who* as a criterion of success in life, we may say at least this, that it is a genuine effort, unwarped by commercial motives, to include the men and women who have achieved most worthy leadership in all reputable walks of life. Whatever flaws it may have, it is acknowledged to be the best list of names for such uses as we are now making of it—and such changes in the list as any group of competent judges might make would not materially affect the general conclusions we have drawn. . . .

25 In much that I have said about success I have used the mathematical term "chance," a term as far removed as any term could be from the popular notion of luck. If all these studies prove anything, they prove that there is a long chain of causal connections binding together the achievements of a man's life and explaining the success of a given moment. That is the nonskid chain that keeps him safe in slippery places. Luck is about as likely to strike a man as lightning, and about as likely to do him any good. The best luck a young man can have is the firm conviction that there is no such thing as luck, and that he will gain in life just about what he deserves, and no more. The man who is waiting around for something lucky to turn up has time to see a preparedness parade pass by him—the procession of those who have formed the habit of turning things up. In a saloon at a prairie station in Montana I saw the sign, "Luck beats science every time." That is the motto of the gambler and of every other fool. But all men who have won durable distinction are proof that science beats luck—science operating through the laws of heredity and habit. . . .

26 Ruskin had no patience with people who talk about "the thoughtlessness of youth" indulgently. "I had infinitely rather hear of thoughtless old age," he declared, "and the indulgence due to *that.* When a man has done his work, and nothing can any way be materially altered in his fate, let him forget his toil, and jest with

his fate, if he will; but what excuse can you find for willfulness of thought at the very time when every crisis of future fortune hangs on your decisions? A youth thoughtless! when all the happiness of his home forever depends on the chances or the passions of an hour! A youth thoughtless! when the career of all his days depends on the opportunity of a moment. A youth thoughtless! when his every act is a foundation stone of future conduct, and every imagination a fountain of life or death! Be thoughtless in *any* afteryears, rather than now."

27 Now let the student profit by the experiences of the thousands who have gone before and greet his next task with the words of Hotspur before the battle of Shrewsbury:

> Oh, gentlemen, the time of life is short;
> To spend that shortness basely were too long,
> If life did ride upon a dial's point,
> Still ending at the arrival of an hour.

Discussion

1. Make a brief topic outline of the selection, recording major ideas only, to show the structure of the essay in the rough.
2. Are you convinced by the argument based on statistics? Do the figures cover enough examples? Do you think that more recent statistics involving grades and later success would necessitate a change in the author's conclusions?
3. How does Foster arrive at a standard of success in life? Do you accept this standard?
4. Does Foster give enough attention to inherited ability—that is, to natural, inborn intelligence?
5. Study the paragraphing in the selection:
   a. In how many instances could relatively short paragraphs be combined into one long paragraph?
   b. What is the method of development of the topic idea in paragraphs 4, 15, 26?

Writing

A. Write a theme on your reasons for going to college.
B. Write a theme on current misconceptions about the value of a college education.

A. E. HOUSMAN · *Knowledge*

1 The acquisition of knowledge needs no [formal] justification: its true sanction is a much simpler affair, and inherent in itself. People are too prone to torment themselves with devising far-fetched reasons: they cannot be content with the simple truth asserted by Aristotle: "all men possess by nature a craving for knowledge." *πάντες ἄνθρωποι τοῦ εἰδέναι ὀρέγονται φύσει.* This is no rare endowment scattered sparingly from heaven that falls on a few heads and passes others by: curiosity, the desire to know things as they are, is a craving no less native to the being of man, no less universal through mankind, than the craving for food and drink. And do you suppose that such a desire means nothing? The very definition of the good, says Aristotle again, is that which all desire. Whatever is pleasant is good, unless it can be shewn that in the long run it is harmful, or, in other words, not pleasant but unpleasant. [Herbert] Spencer himself on another subject speaks thus: "So profound an ignorance is there of the laws of life, that men do not even know that their sensations are their natural guides, and (when not rendered morbid by long continued disobedience) their trustworthy guides." The desire of knowledge does not need, nor could it possibly possess, any higher or more authentic sanction than the happiness which attends its gratification.

2 Perhaps it will be objected that we see, every day of our lives, plenty of people who exhibit no pleasure in learning and experience no desire to know; people, as Plato agreeably puts it, who wallow in ignorance with the complacency of a brutal hog. We do; and here is the reason. If the cravings of hunger and thirst are denied satisfaction, if a man is kept from food and drink, the man starves to death, and there is an end of him. This is a result which arrests the attention of even the least observant mind; so it is generally recognised that hunger and thirst cannot be neglected with impunity, that a man ought to eat and drink. But if the craving for knowledge is denied satisfaction, the result which follows is not so

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——From *Introductory Lecture* by A. E. Housman, published, 1937, by Cambridge University Press and reprinted by their permission.

striking to the eye. The man, worse luck, does not starve to death. He still preserves the aspect and motions of a living human being; so people think that the hunger and thirst for knowledge can be neglected with impunity. And yet, though the man does not die altogether, part of him dies, part of him starves to death: as Plato says, he never attains completeness and health, but walks lame to the end of his life and returns imperfect and good for nothing to the world below.

8 But the desire of knowledge, stifle it though you may, is none the less originally born with every man; and nature does not implant desires in us for nothing, nor endow us with faculties in vain. "Sure," says Hamlet,

> Sure, He that made us with such large discourse,
> Looking before and after, gave us not
> That capability and godlike reason
> To fust in us unused.

The faculty of learning is ours that we may find in its exercise that delight which arises from the unimpeded activity of any energy in the groove nature meant it to run in. Let a man acquire knowledge not for this or that external and incidental good which may chance to result from it, but for itself; not because it is useful or ornamental, but because it is knowledge, and therefore good for man to acquire. "Brothers," says Ulysses in Dante, when with his old and tardy companions he had left Seville on the right hand and Ceuta on the other, and was come to that narrow pass where Hercules assigned his landmarks to hinder man from venturing farther: "Brothers, who through a hundred thousand dangers have reached the West, deny not, to this brief vigil of your senses that remains, experience of the unpeopled world behind the sunset. Consider of what seed ye are sprung: ye were not formed to live like brutes, but to follow virtue and knowledge." For knowledge resembles virtue in this, and differs from other possessions, that it is not merely a means of procuring good, but is good in itself simply: it is not a coin which we pay down to purchase happiness, but has happiness indissolubly bound up with it. Fortitude ~~and~~ continence and honesty are not commended to us on the ground that they conduce, as on the whole they do conduce, to material success, nor yet on the ground that they will be rewarded hereafter: those whose office it is to exhort mankind to virtue are ashamed to degrade the cause they plead by proffering such lures as these. And let us too disdain to take lower ground in commending knowledge: let us insist that the pursuit of knowledge, like the pursuit of righteousness, is part of a man's duty to himself; and remember the Scripture where it is written: "He that refuseth instruction despiseth his own soul."

4 I will not say, as Prof. Tyndall has somewhere said, that all happiness belongs to him who can say from his heart "I covet truth." Entire happiness is not attainable either by this or by any other method. Nay it may be urged on the contrary that the pursuit of truth in some directions is even injurious to happiness, because it compels us to take leave of delusions which were pleasant while they lasted. It may be urged that the light shed on the origin and destiny of man by the pursuit of truth in some directions is not altogether a cheerful light. It may be urged that man stands to-day in the position of one who has been reared from his cradle as the child of a noble race and the heir to great possessions, and who finds at his coming of age that he has been deceived alike as to his origin and his expectations; that he neither springs from the high lineage he fancied, nor will inherit the vast estate he looked for, but must put off his towering pride, and contract his boundless hopes, and begin the world anew from a lower level: and this, it may be urged, comes of pursuing knowledge. But even conceding this, I suppose the answer to be that knowledge, and especially disagreeable knowledge, cannot by any art be totally excluded even from those who do not seek it. Wisdom, said Aeschylus long ago, comes to men whether they will or no. The house of delusions is cheap to build, but draughty to live in, and ready at any instant to fall; and it is surely truer prudence to move our furniture betimes into the open air than to stay indoors until our tenement tumbles about our ears. It is and it must in the long run be better for a man to see things as they are than to be ignorant of them; just as there is less fear of stumbling or of striking against corners in the daylight than in the dark.

5 Nor again will I pretend that, as Bacon asserts, "the pleasure and delight of knowledge and learning far surpasseth all other in nature." This is too much the language of a salesman crying his own wares. The pleasures of the intellect are notoriously less vivid than either the pleasures of sense or the pleasures of the affections; and

therefore, especially in the season of youth, the pursuit of knowledge is likely enough to be neglected and lightly esteemed in comparison with other pursuits offering much stronger immediate attractions. But the pleasure of learning and knowing, though not the keenest, is yet the least perishable of pleasures; the least subject to external things, and the play of chance, and the wear of time. And as a prudent man puts money by to serve as a provision for the material wants of his old age, so too he needs to lay up against the end of his days provision for the intellect. As the years go by, comparative values are found to alter: Time, says Sophocles, takes many things which once were pleasures and brings them nearer to pain. In the day when the strong men shall bow themselves, and desire shall fail, it will be a matter of yet more concern than now, whether one can say "my mind to me a kingdom is"; and whether the windows of the soul look out upon a broad and delightful landscape, or face nothing but a brick wall.

6 Well then, once we have recognised that knowledge in itself is good for man, we shall need to invent no pretexts for studying this subject or that; we shall import no extraneous considerations of use or ornament to justify us in learning one thing rather than another. If a certain department of knowledge specially attracts a man, let him study that, and study it because it attracts him; and let him not fabricate excuses for that which requires no excuse, but rest assured that the reason why it most attracts him is that it is best for him. The majority of mankind, as is only natural, will be most attracted by those sciences which most nearly concern human life; those sciences which, in Bacon's phrase, are drenched in flesh and blood, or, in the more elegant language of the Daily Telegraph, palpitate with actuality. The men who are attracted to the drier and the less palpitating sciences, say logic or pure mathematics or textual criticism, are likely to be fewer in number; but they are not to suppose that the comparative unpopularity of such learning renders it any the less worthy of pursuit. Nay they may if they like console themselves with Bacon's observation that "this same *lumen siccum*[1] doth parch and offend most men's watery and soft natures," and infer, if it pleases them, that their natures are less soft and watery than other men's. But be that as it may, we can all dwell together in unity without crying up our own pursuits or depreciating

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[1] *lumen siccum:* dry light. [Editors' note.]

the pursuits of others on factitious grounds. We are not like the Ottoman sultans of old time, who thought they could never enjoy a moment's security till they had murdered all their brothers. There is no rivalry between the studies of Arts and Laws and Science but the rivalry of fellow-soldiers in striving which can most victoriously achieve the common end of all, to set back the frontier of darkness.

7 It is the glory of God, says Solomon, to conceal a thing: but the honour of kings is to search out a matter. Kings have long abdicated that province; and we students are come into their inheritance: it is our honour to search out the things which God has concealed.✓ In Germany at Easter time they hide coloured eggs about the house and the garden that the children may amuse themselves in hunting after them and finding them. It is to some such game of hide-and-seek that we are invited by that power which planted in us the desire to find out what is concealed, and stored the universe with hidden things that we might delight ourselves in discovering them. And the pleasure of discovery differs from other pleasures in this, that it is shadowed by no fear of satiety on the one hand or of frustration on the other. Other desires perish in their gratification, but the desire of knowledge never: the eye is not satisfied with seeing nor the ear filled with hearing. Other desires become the occasion of pain through dearth of the material to gratify them, but not the desire of knowledge: the sum of things to be known is inexhaustible, and however long we read we shall never come to the end of our story-book. So long as the mind of man is what it is, it will continue to exult in advancing on the unknown throughout the infinite field of the universe; and the tree of knowledge will remain for ever, as it was in the beginning, a tree to be desired to make one wise.

Discussion

1. What is the thesis or main idea of the selection?
2. Do you agree that knowledge is good for its own sake, that it produces happiness? Explain.
3. According to the author, what are the advantages and disadvantages of the pleasures of learning and knowing as compared with the pleasures of the senses and affections?
4. Does the author seem to say that all kinds of knowledge are of equal importance? Justify your answer.
5. What are the sciences "which most nearly concern human life" (paragraph 6)? Explain why they do. Does Housman

mean by science any organized body of knowledge, or only the natural sciences, such as chemistry and biology?

6. Does Housman imply a different—and possibly higher—standard of success than does Foster in "Study and Success," pp. 77–84?
7. Explain the following in the light of their contexts. The numbers refer to paragraphs.
   universal through mankind (1); *any higher or more authentic sanction than the happiness which attends its gratification* (1); *to take leave of delusions which were pleasant while they lasted* (4); *the child of a noble race and the heir to great possessions* (4); *the least subject to external things, and the play of chance, and the wear of time* (5); *extraneous considerations of use or ornament* (6); *palpitate with actuality* (6).
8. Find in the essay some sentences, not quotations, which would indicate that Housman was—as he was—an excellent poet.
9. Point out some effective analogies.
10. Explain how the author uses the colon.
11. Justify the punctuation of the second sentence in paragraph 1; of the fourth sentence in paragraph 5.

Writing

Write a 300–400 word summary of the selection in which you reproduce the author's ideas in your own words. Give these ideas clear expression and the same relative emphasis they have in the selection.

JOHN HENRY NEWMAN · *Knowledge and Learning*

1 I suppose the *primâ-facie* view which the public at large would take of a University, considering it as a place of Education, is nothing more or less than a place for acquiring a great deal of

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—From "Knowledge Viewed in Relation to Learning," *The Idea of a University*, 1873. Text taken from the edition of Longmans, Green and Company, 1901.

knowledge on a great many subjects. Memory is one of the first developed of mental faculties; a boy's business when he goes to school is to learn, that is, to store up things in his memory. For some years his intellect is little more than an instrument for taking in facts, or a receptacle for storing them; he welcomes them as fast as they come to him; he lives on what is without; he has his eyes ever about him; he has a lively susceptibility of impressions; he imbibes information of every kind; and little does he make his own in a true sense of the word, living rather upon his neighbors all around him. He has opinions, religious, political, and literary, and, for a boy, is very positive in them and sure about them; but he gets them from his schoolfellows, or his masters, or his parents, as the case may be. Such as he is in his other relations, such also is he in his school exercises; his mind is observant, sharp, ready, retentive; he is almost passive in the acquisition of knowledge. I say this in no disparagement of the idea of a clever boy. Geography, chronology, history, language, natural history, he heaps up the matter of these studies as treasures for a future day. It is the seven years of plenty with him: he gathers in by handfuls, like the Egyptians, without counting; and though, as time goes on, there is exercise for his argumentative powers in the Elements of Mathematics, and for his taste in the Poets and Orators, still, while at school, or at least, till quite the last years of his time, he acquires, and little more; and when he is leaving for the University, he is mainly the creature of foreign influences and circumstances, and made up of accidents, homogeneous or not, as the case may be. Moreover, the moral habits, which are a boy's praise, encourage and assist this result; that is, diligence, assiduity, regularity, despatch, persevering application; for these are the direct conditions of acquisition, and naturally lead to it. Acquirements, again, are emphatically producible, and at a moment; they are a something to show, both for master and scholar; an audience, even though ignorant themselves of the subjects of an examination, can comprehend when questions are answered and when they are not. Here again is a reason why mental culture is in the minds of men identified with the acquisition of knowledge.

2 The same notion possesses the public mind, when it passes on from the thought of a school to that of a University: and with the best of reasons so far as this, that there is no true culture without

acquirements, and that philosophy presupposes knowledge. It requires a great deal of reading, or a wide range of information, to warrant us in putting forth our opinions on any serious subject; and without such learning the most original mind may be able indeed to dazzle, to amuse, to refute, to perplex, but not to come to any useful result or any trustworthy conclusion. There are indeed persons who profess a different view of the matter, and even act upon it. Every now and then you will find a person of vigorous or fertile mind, who relies upon his own resources, despises all former authors, and gives the world, with the utmost fearlessness, his views upon religion, or history, or any other popular subject. And his works may sell for a while; he may get a name in his day; but this will be all. His readers are sure to find on the long run that his doctrines are mere theories, and not the expression of facts, that they are chaff instead of bread, and then his popularity drops as suddenly as it rose.

3 Knowledge then is the indispensable condition of expansion of mind, and the instrument of attaining to it; this cannot be denied, it is ever to be insisted on; I begin with it as a first principle; however, the very truth of it carries men too far, and confirms to them the notion that it is the whole of the matter. A narrow mind is thought to be that which contains little knowledge; and an enlarged mind, that which holds a great deal; and what seems to put the matter beyond dispute is, the fact of the great number of studies which are pursued in a University, by its very profession. Lectures are given on every kind of subject; examinations are held; prizes awarded. There are moral, metaphysical, physical Professors; Professors of languages, of history, of mathematics, of experimental science. Lists of questions are published, wonderful for their range and depth, variety and difficulty; treatises are written, which carry upon their very face the evidence of extensive reading or multifarious information; what then is wanting for mental culture to a person of large reading and scientific attainments? what is grasp of mind but acquirement? where shall philosophical repose be found, but in the consciousness and enjoyment of large intellectual possessions?

4 And yet this notion is, I conceive, a mistake, and my present business is to show that it is one, and that the end of a Liberal Education is not mere knowledge, or knowledge considered in its *matter;* and I shall best attain my object, by actually setting down

some cases, which will be generally granted to be instances of the process of enlightenment or enlargement of mind, and others which are not, and thus, by the comparison, you will be able to judge for yourselves, Gentlemen, whether Knowledge, that is, acquirement, is after all the real principle of the enlargement, or whether that principle is not rather something beyond it.

5 For instance, let a person, whose experience has hitherto been confined to the more calm and unpretending scenery of these islands, . . . go for the first time into parts where physical nature puts on her wilder and more awful forms, whether at home or abroad, as into mountainous districts; or let one, who has ever lived in a quiet village, go for the first time to a great metropolis,—then I suppose he will have a sensation which perhaps he never had before. He has a feeling not in addition or increase of former feelings, but of something different in its nature. He will perhaps be borne forward, and find for a time that he has lost his bearings. He has made a certain progress, and he has a consciousness of mental enlargement; he does not stand where he did, he has a new centre, and a range of thoughts to which he was before a stranger.

6 Again, the view of the heavens which the telescope opens upon us, if allowed to fill and possess the mind, may almost whirl it round and make it dizzy. It brings in a flood of ideas, and is rightly called an intellectual enlargement, whatever is meant by the term.

7 And so again, the sight of beasts of prey and other foreign animals, their strangeness, the originality (if I may use the term) of their forms and gestures and habits and their variety and independence of each other, throw us out of ourselves into another creation, and as if under another Creator, if I may so express the temptation which may come on the mind. We seem to have new faculties, or a new exercise for our faculties, by this addition to our knowledge; like a prisoner, who, having been accustomed to wear manacles or fetters, suddenly finds his arms and legs free.

8 Hence Physical Science generally, in all its departments, as bringing before us the exuberant riches and resources, yet the orderly course, of the Universe, elevates and excites the student, and at first, I may say, almost takes away his breath, while in time it exercises a tranquilizing influence upon him.

9 Again, the study of history is said to enlarge and enlighten

the mind, and why? because, as I conceive, it gives it a power of judging of passing events, and of all events, and a conscious superiority over them, which before it did not possess.

10 And in like manner, what is called seeing the world, entering into active life, going into society, travelling, gaining acquaintance with the various classes of the community, coming into contact with the principles and modes of thought of various parties, interests, and races, their views, aims, habits and manners, their religious creeds and forms of worship,—gaining experience how various yet how alike men are, how low-minded, how bad, how opposed, yet how confident in their opinions; all this exerts a perceptible influence upon the mind, which it is impossible to mistake, be it good or be it bad, and is popularly called its enlargement.

11 And then again, the first time the mind comes across the arguments and speculations of unbelievers, and feels what a novel light they cast upon what he has hitherto accounted sacred; and still more, if it gives in to them and embraces them, and throws off as so much prejudice what it has hitherto held, and, as if waking from a dream, begins to realize to its imagination that there is now no such thing as law and the transgression of law, that sin is a phantom, and punishment a bugbear, that it is free to sin, free to enjoy the world and the flesh; and still further, when it does enjoy them, and reflects that it may think and hold just what it will, that "the world is all before it where to choose," and what system to build up as its own private persuasion; when this torrent of wilful thoughts rushes over and inundates it, who will deny that the fruit of the tree of knowledge, or what the mind takes for knowledge, has made it one of the gods, with a sense of expansion and elevation,—an intoxication in reality, still, so far as the subjective state of the mind goes, an illumination? Hence the fanaticism of individuals or nations, who suddenly cast off their Maker. Their eyes are opened; and, like the judgment-stricken king in the Tragedy, they see two suns, and a magic universe, out of which they look back upon their former state of faith and innocence with a sort of contempt and indignation, as if they were then but fools, and the dupes of imposture.

12 On the other hand, Religion has its own enlargement, and an enlargement, not of tumult, but of peace. It is often remarked of

uneducated persons, who have hitherto thought little of the unseen world, that, on their turning to God, looking into themselves, regulating their hearts, reforming their conduct, and meditating on death and judgment, heaven and hell, they seem to become, in point of intellect, different beings from what they were. Before, they took things as they came, and thought no more of one thing than another. But now every event has a meaning; they have their own estimate of whatever happens to them; they are mindful of times and seasons, and compare the present with the past; and the world, no longer dull, monotonous, unprofitable, and hopeless, is a various and complicated drama, with parts and an object, and an awful moral.

13 Now from these instances, to which many more might be added, it is plain, first, that the communication of knowledge certainly is either a condition or the means of that sense of enlargement or enlightenment, of which at this day we hear so much in certain quarters: this cannot be denied; but next, it is equally plain, that such communication is not the whole of the process. The enlargement consists, not merely in the passive reception into the mind of a number of ideas hitherto unknown to it, but in the mind's energetic and simultaneous action upon and towards and among those new ideas, which are rushing in upon it. It is the action of a formative power, reducing to order and meaning the matter of our acquirements; it is a making the objects of our knowledge subjectively our own, or, to use a familiar word, it is a digestion of what we receive, into the substance of our previous state of thought; and without this no enlargement is said to follow. There is no enlargement, unless there be a comparison of ideas one with another, as they come before the mind, and a systematizing of them. We feel our minds to be growing and expanding *then,* when we not only learn, but refer what we learn to what we know already. It is not the mere addition to our knowledge that is the illumination; but the locomotion, the movement onwards, of that mental centre, to which both what we know, and what we are learning, the accumulating mass of our acquirements, gravitates. And therefore a truly great intellect, and recognized to be such by the common opinion of mankind, such as the intellect of Aristotle, or of St. Thomas, or of Newton, or of Goethe, . . . is one which takes a connected view of old and new, past and present, far and near, and which has an insight into the

influence of all these one on another; without which there is no whole, and no centre. It possesses the knowledge, not only of things, but also of their mutual and true relations; knowledge, not merely considered as acquirement, but as philosophy.

14 Accordingly, when this analytical, distributive, harmonizing process is away, the mind experiences no enlargement, and is not reckoned as enlightened or comprehensive, whatever it may add to its knowledge. For instance, a great memory, as I have already said, does not make a philosopher, any more than a dictionary can be called a grammar. There are men who embrace in their minds a vast multitude of ideas, but with little sensibility about their real relations towards each other. These may be antiquarians, annalists, naturalists; they may be learned in the law; they may be versed in statistics; they are most useful in their own place; I should shrink from speaking disrespectfully of them; still, there is nothing in such attainments to guarantee the absence of narrowness of mind. If they are nothing more than well-read men, or men of information, they have not what specially deserves the name of culture of mind, or fulfills the type of Liberal Education.

15 In like manner, we sometimes fall in with persons who have seen much of the world, and of the men who, in their day, have played a conspicuous part in it, but who generalize nothing, and have no observation, in the true sense of the word. They abound in information in detail, curious and entertaining, about men and things; and, having lived under the influence of no very clear or settled principles, religious or political, they speak of every one and every thing, only as so many phenomena, which are complete in themselves, and lead to nothing, not discussing them, or teaching any truth, or instructing the hearer, but simply talking. No one would say that these persons, well informed as they are, had attained to any great culture of intellect or to philosophy.

16 The case is the same still more strikingly where the persons in question are beyond dispute men of inferior powers and deficient education. Perhaps they have been much in foreign countries, and they receive, in a passive, otiose, unfruitful way, the various facts which are forced upon them there. Seafaring men, for example, range from one end of the earth to the other; but the multiplicity of external objects, which they have encountered, forms no symmetrical and consistent picture upon their imagination; they see

the tapestry of human life, as it were on the wrong side, and it tells no story. They sleep, and they rise up, and they find themselves, now in Europe, now in Asia; they see visions of great cities and wild regions; they are in the marts of commerce, or amid the islands of the South; they gaze on Pompey's Pillar, or on the Andes; and nothing which meets them carries them forward or backward, to any idea beyond itself. Nothing has a drift or relation; nothing has a history or a promise. Every thing stands by itself, and comes and goes in its turn, like the shifting scenes of a show, which leave the spectator where he was. Perhaps you are near such a man on a particular occasion, and expect him to be shocked or perplexed at something which occurs; but one thing is much the same to him as another, or, if he is perplexed, it is as not knowing what to say, whether it is right to admire, or to ridicule, or to disapprove, while conscious that some expression of opinion is expected from him; for in fact he has no standard of judgment at all, and no landmarks to guide him to a conclusion. Such is mere acquisition, and, I repeat, no one would dream of calling it philosophy.

17 Instances, such as these, confirm, by the contrast, the conclusion I have already drawn from those which preceded them. That only is true enlargement of mind which is the power of viewing many things at once as one whole, of referring them severally to their true place in the universal system, of understanding their respective values, and determining their mutual dependence. Thus is that form of Universal Knowledge, of which I have on a former occasion spoken, set up in the individual intellect, and constitutes its perfection. Possessed of this real illumination, the mind never views any part of the extended subject-matter of Knowledge without recollecting that it is but a part, or without the associations which spring from this recollection. It makes every thing in some sort lead to every thing else; it would communicate the image of the whole to every separate portion, till that whole becomes in imagination like a spirit, every where pervading and penetrating its component parts, and giving them one definite meaning. Just as our bodily organs, when mentioned, recall their function in the body, as the word "creation" suggests the Creator, and "subjects" a sovereign, so, in the mind of the Philosopher, as we are abstractedly conceiving of him, the elements of the physical and moral world, sciences, arts, pursuits, ranks, offices, events, opinions, individu-

alities, are all viewed as one, with correlative functions, and as gradually by successive combinations converging, one and all, to the true centre.

18 To have even a portion of this illuminative reason and true philosophy is the highest state to which nature can aspire, in the way of intellect; it puts the mind above the influences of chance and necessity, above anxiety, suspense, unsettlement, and superstition, which is the lot of the many. Men, whose minds are possessed with some one object, take exaggerated views of its importance, are feverish in the pursuit of it, make it the measure of things which are utterly foreign to it, and are startled and despond if it happens to fail them. They are ever in alarm or in transport. Those on the other hand who have no object or principle whatever to hold by, lose their way, every step they take. They are thrown out, and do not know what to think or say, at every fresh juncture; they have no view of persons, or occurrences, or facts, which come suddenly upon them, and they hang upon the opinion of others, for want of internal resources. But the intellect, which has been disciplined to the perfection of its powers, which knows, and thinks while it knows, which has learned to leaven the dense mass of facts and events with the elastic force of reason, such an intellect cannot be partial, cannot be exclusive, cannot be impetuous, cannot be at a loss, cannot but be patient, collected, and majestically calm, because it discerns the end in every beginning, the origin in every end, the law in every interruption, the limit in each delay; because it ever knows where it stands, and how its path lies from one point to another. It is the τετράγωνος of the Peripatetic,[1] and has the "nil admirari" [2] of the Stoic,—

> Felix qui potuit rerum cognoscere causas,
> Atque metus omnes, et inexorabile fatum
> Subjecit pedibus, strepitumque Acherontis avari.[3]

There are men who, when in difficulties, originate at the moment vast ideas or dazzling projects; who, under the influence of excitement, are able to cast a light, almost as if from inspiration, on a subject or course of action which comes before them; who have a sudden presence of mind equal to any emergency, rising with the occasion, and an undaunted magnanimous bearing, and an energy and keenness which is but made intense by opposition. This is genius, this is heroism; it is the exhibition of a natural gift, which no culture can teach, at which no Institution can aim; here, on the contrary, we are concerned, not with mere nature, but with training and teaching. That perfection of the Intellect, which is the result of Education, and its *beau ideal,* to be imparted to individuals in their respective measures, is the clear, calm, accurate vision and comprehension of all things, as far as the finite mind can embrace them, each in its place, and with its own characteristics upon it. It is almost prophetic from its knowledge of history; it is almost heart-searching from its knowledge of human nature; it has almost supernatural charity from its freedom from littleness and prejudice; it has almost the repose of faith, because nothing can startle it; it has almost the beauty and harmony of heavenly contemplation, so intimate is it with the eternal order of things and the music of the spheres.

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[1] An allusion to Aristotle's *Ethics*—the good and *foursquare* man.

[2] To be amazed at nothing.

[3] Happy the man who can understand nature's causes, and thus spurn all fear and inexorable fate and the roar of greedy Acheron.

MIRRA KOMAROVSKY · *What Should Colleges Teach Women?*

1 Does a college education unfit women for their role as wives and mothers? A good many people seem to think so. Last winter, at a convention of educators in San Francisco, women's colleges were flatly accused of having "deprecated marriage as an absorbing vocation," and a number of people in high places are now urging that colleges specifically prepare their female students for family life. Dr. Mildred McAfee Horton, retiring president of Wellesley, said in a recent address: "College failed to teach these women that . . . the family is entirely respectable as a sphere of activity." And in a recent article the president of Mills College,

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— From *Harper's Magazine,* November, 1949. Used by permission of *Harper's Magazine* and Mirra Komarovsky.

Lynn White, attacked women's colleges for treating their students as if they were "men in disguise."

2 Dr. White charged that educators have disregarded the biological differences between men and women and erroneously assumed that the path to equality with men lies in giving both sexes the same education. The result, he claimed, has been "to develop . . . in millions of women a sense of frustration, of failure, a loss of self-respect"; and the crying need today is "to shake off this subservience to masculine values" and design a "distinctively feminine college curriculum." Such a curriculum would reflect the greater interest of women in human relations, their comparatively smaller enthusiasm for "lofty and abstract structures of ideas," their greater concern with the practical and the applied in the arts, and, perhaps above all, their concern with the family and domesticity. Indeed, Dr. White even suggested that it might be possible to present a beginning college course in foods which would be "as exciting—and as difficult to work up after college—as a course in post-Kantian philosophy." "Why not study," he continued, "the theory and preparation of a Basque *paella,* of a well-marinated shishkebab . . . an authoritative curry; even such simple sophistication as serving cold artichokes with fresh milk?"

3 Criticism of a liberal-arts education for women is not new. Eighty-four years ago, in words that were echoed last winter at San Francisco, Harriet Beecher Stowe declared that there was "a too-great tendency of the age to make the education of women anti-domestic." But the fact that modern critics ~~are reit~~erating what was said in 1865 does not necessarily mean that there is nothing valid in what they say. Some of the criticism can, of course, be passed off as special pleading by educational theorists, but there is stubborn evidence that a good deal of it comes from people who cannot be ignored: the women who have themselves been through the mill and who are not satisfied with what they got.

4 For example, there are the responses of seven hundred recent graduates of Barnard, one of the outstanding Eastern colleges for women. Last summer a committee of the faculty sent out 4,300 questionnaires to alumnae of the classes of 1930 to 1948 asking, "What changes in your opinion would make the college more useful to its graduates as (a) citizens, (b) workers, (c) members of families? You may wish to suggest new courses, new counseling

agencies, changes in existing courses, or in the general climate of opinion."

5 Seven hundred alumnae answered. There is no way of knowing whether or not they were representative. Possibly it is the dissatisfied graduates who are most apt to respond to such a questionnaire. But it is worth noting that 40 per cent of those who did answer asked for better preparation for family life; 20 per cent for more vocational training. All that some asked was that the college give the students greater assurance of their value as housewives and mothers. "When faced with a messy kitchen and a batch of diapers to be washed, after having been taught for four years about the higher values of life and her own importance and responsibility as a human being, the graduate cannot help feeling that she is too good for that sort of thing," one wrote. Others wanted specific domestic training, in everything from baby care to cooking. "No one would hire a stenographer who cannot type, but we expect men to marry us whether or not we can cook, no matter how little we know about children. It is appalling," was another of the comments.

6 These views, however typical or atypical of Barnard's recent graduates they may be, reflect an attitude toward college education which one frequently encounters these days among the graduates of the traditional women's colleges. As another graduate of another college put it, in a survey conducted by the *New York Times:* "College prepared me . . . for something I am not, and left me woefully lacking in knowledge I now need; it seems to me college prepared me to be another female college professor."

7 The critics have a case. Higher education for women emerged out of a social struggle. Its advocates in the nineteenth century, when Mt. Holyoke, Vassar, Smith, Wellesley, Radcliffe, Bryn Mawr, and Barnard were founded, were fighting for the recognition of women's intellectual and professional interests. Understandably they stressed these interests rather than the already accepted family roles, and some of them tended to deprecate housekeeping, if only by their silence about it.

8 In so far as such an attitude still persists in women's colleges, it is a bad thing. Domestic life is still basic to society and there is still no practical alternative to it for thousands of women graduates. Furthermore, the conservative college (and this is equally true of men's colleges) has traditionally been aloof from the living needs

of its students in college and afterward. It is, perhaps, unfair to say that colleges are indifferent to their graduates' effectiveness in later life, but it is true that many assume too complacently that the education they give ensures effectiveness. With a naïve rationalism, colleges often believe that book learning is automatically carried over into practice.

9 But to admit all this is not to say, as a good many critics of women's education do say, that the education of women should be radically different from the education of men, or that the liberal-arts curricula of the leading women's colleges should be discarded. The strength of the critics lies in their pointing out of the problem, not in the solutions they propose.

10 Neither the innate differences between men and women nor their different social roles call for any radical differentiation in their education. The liberal-arts college addresses itself to both men and women as human beings, and a curriculum devised to develop each student's intellectual, artistic, and social potentialities serves both equally well.

11 To be sure, psychological tests have revealed some intellectual differences between the sexes; for example, women do better in verbal and worse in mathematical tests. Let us assume, although this is far from certain, that these tests really reflect innate differences and not merely the effects of early training. Does this call for a "distinctively feminine curriculum?" Must we bewail with the recent best seller, *Modern Woman: The Lost Sex,* the "disastrous mistake of forcing women into the masculine pattern?" I do not think so.

12 The critics have uniformly overlooked one fact of paramount importance: the psychological tests show much greater differences within each sex than between them. In every tested mental quality there is a great deal of overlapping between men and women; many a co-ed could probably outshine her boy friend in mathematics (though it may be the better part of valor to be discreet about it). Similarly, there are boys on any college campus who can outdo the girls in verbal examinations. This means that what is needed is a rich and diversified curriculum to bring out the special talents of the individual student regardless of sex. When the critics say that woman's nature is violated if she is forced to "imitate men," they

are ignoring the scores of women with special interests and abilities whose nature would be equally violated by being pressed into a special "feminine curriculum."

13 There are no "unfeminine" talents, whether they are in mathematics or medicine, engineering or politics. We can use them all. During the recent war the Navy readily engaged a gifted woman mathematician to train midshipmen. And even in peacetime we are not so rich in human resources that we can squander potential leadership because of outmoded notions about sex differences.

14 Nevertheless, the fact remains that the college boy will normally become a family provider while his sister will be a mother and a housekeeper. Therefore, the critics insist, since a woman's primary concern is with the family, her education should put greater emphasis on such subjects as sociology, psychology, and anthropology, which deal with human relations.

15 Now I have no quarrel with anyone who wants to give sociology a more important place in college curricula, and I am completely in favor of training women for family life.

16 But why stop with women? Reforms in this area are equally needed in men's colleges, and whatever special problems women have (and they do have them) may be met within the framework of a similar curriculum. In fact, as a witty colleague remarked: "If it is true that women are already endowed by nature with intuition and skill in handling people, then, for mercy's sake, let us hurry up and educate the men for their own protection!"

17 We have already gone too far in making women the sole "experts" in family relations. At the meeting of the National Congress of Parents and Teachers held last May, a number of speakers urged parenthood study for boys. "We have all been doing too good a job with the girls and not enough with the boys," said one speaker. "That means that the girls want to treat their children the way the child psychologists say they should, and the boys want to treat them the way their parents did. And that makes for conflict in many young marriages."

18 At the same meeting it was reported that when a State School of Home Economics set up a course in child development for young mothers, the class met only once. The women declared:

"Oh, we know all that, tell it to our husbands." So the mothers stayed home and watched the babies while the fathers went to class.

19 Or take another illustration: When the population of a residential suburb of New York City was up in arms about its school's progressive policies a year or so ago, the two important women's and men's clubs of the community found themselves on the opposite sides of the barricades.

20 Every member of the family suffers when education for family living is limited to women alone. A child needs *two* understanding parents; a father should be something more in the family than the person who pays the bills, and a mother should not be expected to take all the responsibility for family relationships. If she is—as a distinguished sociologist, the late Willard W. Waller, once pointed out—she will be the one to make *all* the adjustments, often at the cost of her own personality. Attuned to the personalities of her husband and children, she alone will have to forego the luxury of spontaneity, of being angry or tired, loving or resentful, sociable or withdrawn, when her own needs dictate it. If education can provide any answers to the problems of marriage and parenthood, we had better let the men in on it, too!

21 What about the other arguments for special education for women? Is it true that liberal-arts studies "are even more important for a woman than for a man?" Not necessarily. It can just as easily be argued that it is the future career-driven, middle-class male who most needs to acquire a broad cultural background in college; the woman will have more leisure in adult life to pursue such studies. Actually, both men and women need the humanities—as the growing pleas of the legal, medical, and engineering professions for a more liberal and less specialized education in the pre-professional college years are making more and more clear. And equally, both sexes require as much vocational counseling and preparation for life as a liberal-arts college can give.

II

22 Higher education of women does present more complex problems than higher education of men because women's status in modern society is still full of inconsistencies. Any girl graduate's future is uncertain and may follow not only different but con-

tradictory patterns which will require conflicting skills and attitudes of mind. No one can be sure during her college years of just what a girl's life path will be: whether she will marry or remain single; whether it is worth while to invest time and money for her professional training. A college girl hell-bent on a career may find herself spending the years after college in a round of cleaning, cooking, washing, and mending. Another who announced in college that all she wanted was "lots and lots of children" may later be forced to help support her family. And there is the still more complicated problem of the woman who must be prepared for the transition from a vocation to full-time family life, and perhaps later for a return to a career. What should the philosophy of women's education be in the face of all these uncertain roles?

23 It is easy to agree on certain elements. Whatever the woman's life, a solid liberal-arts education is a valuable asset. Whatever her life, critical judgment, refinement of perception, a broadening of outlook, will stand her in good stead. And anything the college can contribute to her personal adjustment through wise counseling is all to the good.

24 Beyond these, a women's college should provide an atmosphere favorable to a girl's future role as wife and mother. As far as the students themselves are concerned, this is already the case. In a study done on one of our most "highbrow" campuses, the vast majority of students were looking forward to marriage and motherhood as the center of their lives. Sixty per cent expressed no desire whatever to continue with a job after they had children, and they anticipated the career of housewife without the slightest misgiving. Another large group—some 30 per cent—voted less enthusiastically for full-time domestic life, expressing the hope that they would be able to return to some outside occupation when their children had grown up. Only 10 per cent were uncompromising "career girls" who intended to combine family and career without any interruptions. Thus, if any changes of attitude are required, they are among the faculty and not among the students.

25 But the proper climate of opinion alone is not enough. Preparation for family life should go further. A number of more or less new sciences—psychology, anthropology, sociology—are beginning to tell us more and more about human nature, child de-

velopment, and family relations; and this knowledge should be effectively placed at the student's service.

26 And now, what about domestic skills such as cooking, interior decorating, purchasing, etc.? No one would deny that a vast majority of women would do well to acquire them. The only question is when and where. And if I take issue with the view of one college alumna that "college training in home decoration is just as desirable as the ability to recite the causes of a war," it is not because I believe that these practical skills are unimportant or even less important. But just as a mature individual recognizes that life often involves choices between equally desirable ends, so an institution must recognize its special function vis-à-vis other agencies in the community. There are certain ends a liberal-arts college can best serve, and it must reconcile itself to the fact that it will not be equally useful to the student in all of her various capacities. Colleges differ in this respect, but any college may legitimately exclude the teaching of practical skills and limit itself to courses of broader intellectual scope.

27 In preparation for citizenship, women's colleges perhaps do have a unique function. College women often find a peculiarly suitable channel for service and self-fulfillment in community and public affairs, because these are usually more compatible with family life than a paid occupation is. The best colleges already offer rigorous academic training in the social sciences. What is needed is more field work to help the student span the gap between the printed word and experience.

28 Of course, none of the educational reforms outlined here will accomplish what the critics of women's colleges demand—they will not allay modern women's discontent. But, contrary to the popular view, the root of this discontent lies outside the campus. Too often colleges are held responsible for what is in reality society's problem; too often the critics assume that the values set by the women's colleges are the cause of all the current dissatisfaction with homemaking.

29 The fact is that society today frustrates the legitimate interests of women and fails to give them a real choice in the matter of their lives. Some women who would make ~~excellent mothers~~ are not temperamentally suited to full-time housekeeping and would be happier combining family life and a career. Others, quite con-

tent to be housewives, chafe against constant and almost exclusive association with young children, lack of privacy, absence of large blocks of free time, the seven-day week and fifty-two-week year without vacations. One college graduate defeated by the unrelieved monotony of housework blamed her college for having made her feel "too good for that sort of thing." Well, it is just possible that she *is* too good for it.

30 We can, of course, try to soothe these discontented women by passionately extolling the duties and glories of the housewife. But it won't work. It will only increase their sense of guilt. "What is wrong with me that home and family are not enough?" Here is where there is a universal need for imagination in social reconstruction—new ways of co-operation among mothers, new measures in the community. But the colleges cannot be blamed. They cannot take responsibility for what is really society's unfinished business.

ROBERT M. HUTCHINS · *Gate Receipts and Glory*

1 The football season is about to release the nation's colleges to the pursuit of education, more or less. Soon the last nickel will be rung up at the gate, the last halfback will receive his check, and the last alumnus will try to pay off those bets he can recall. Most of the students have cheered themselves into insensibility long ago.

2 This has been going on for almost fifty years. It is called "overemphasis on athletics," and everybody deplores it. It has been the subject of scores of reports, all of them shocking. It has been held to be crass professionalism, all the more shameful because it masquerades as higher education. But nobody has done anything about it. Why? I think it is because nobody wants to. Nobody wants, or dares, to defy the public, dishearten the students, or deprive alma

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— From *The Saturday Evening Post,* December 3, 1938. Reprinted by permission of Robert M. Hutchins.

mater of the loyalty of the alumni. Most emphatically of all, nobody wants to give up the gate receipts. The trouble with football is the money that is in it, and every code of amateurism ever written has failed for this reason.

3 Money is the cause of athleticism in the American colleges. Athleticism is not athletics. Athletics is physical education, a proper function of the college if carried on for the welfare of the students. Athleticism is not physical education but sports promotion, and it is carried on for the monetary profit of the colleges through the entertainment of the public. This article deals with athleticism, its cause, its symptoms and its cure.

4 Of all the crimes committed by athleticism under the guise of athletics, the most heinous is the confusion of the country about the primary purpose of higher education. The primary purpose of higher education is the development of the mind. This does not mean that colleges and universities should neglect the health of their students or should fail to provide them with every opportunity for physical development. The question is a question of emphasis. Colleges and universities are the only institutions which are dedicated to the training of the mind. In these institutions, the development of the body is important, but secondary.

5 The apologists of athleticism have created a collection of myths to convince the public that biceps is a substitute for brains. Athletics, we are told, produces well-rounded men, filled with the spirit of fair play. Athletics is good for the health of the players; it is also good for the morals of the spectators. Leadership on the playing fields means leadership in life. The Duke of Wellington said so. Athletes are red-blooded Americans, and athletic colleges are bulwarks against Communism. Gate receipts are used to build laboratories and to pay for those sports that can't pay for themselves. Football is purely a supplement to study. And without a winning team a college cannot hope to attract the students or the gifts which its work requires.

6 These myths have about them a certain air of plausibility. They are widely accepted. But they are myths. As the Carnegie Foundation has said, "The fact that all these supposed advantages are tinged at one point or another with the color of money casts over every relaxation of standards a mercenary shadow." The myths are designed, consciously or unconsciously, to conceal the

color of money and to surround a financial enterprise with the rosy glow of Health, Manhood, Public Spirit and Education.

7 Since the primary task of colleges and universities is the development of the mind, young people who are more interested in their bodies than in their minds should not go to college. Institutions devoted to the development of the body are numerous and inexpensive. They do not pretend to be institutions of learning, and there is no faculty of learned men to consume their assets or interfere with their objectives.

8 Athleticism attracts boys and girls to college who do not want and cannot use a college education. They come to college for "fun." They would be just as happy in the grandstand at the Yankee Stadium, and at less expense to their parents. They drop out of college after a while, but they are a sizable fraction of many freshman classes, and, while they last, they make it harder for the college to educate the rest. Even the earnest boys and girls who come to college for an education find it difficult, around the middle of November, to concentrate on the physiology of the frog or the mechanics of the price structure.

9 Worse yet, athleticism gives the student a mistaken notion of the qualities that make for leadership in later life. The ambition of the average student who grew up reading Stover at Yale is to imitate as closely as possible the attitude and manners of the current football hero. Since this country, like all others, needs brains more than brawn at the moment, proposing football heroes as models for the rising generation can hardly have a beneficial effect on the national future.

10 The exponents of athleticism tell us that athletics is good for a boy. They are right. But athleticism focuses its attention on doing good for the boys who least need it. Less than half of the undergraduate males—800 out of 1900 at the University of Chicago, for instance—are eligible for intercollegiate competition. But where athleticism reigns, as happily it does not at Chicago, 75 per cent of the attention of the physical-education staff must be lavished on that fraction of the student body who make varsity squads. The Carnegie Foundation found that 37 per cent of all undergraduates engage in no athletic activity, not even in intramural games. Since graduate and professional students are also eliminated from competition, we have more than half the college and university population

of the country neglected because we devote ourselves, on the pretext that athletics is good for a boy, to overdeveloping a handful of stars.

11 And athletics, as it is conducted in many colleges today, is not even good for the handful. Since the fate of the coach sometimes depends on victory, players have sometimes been filled with college spirit through caffein tablets and strychnine. At least one case reached the public in which a coach removed a plaster cast from a star's ankle and sent him in "to win." The Carnegie Foundation found that 17.6 per cent of all football players in twenty-two colleges suffered serious injuries. The same report asserts that college athletes have about the same life expectancy as the average college man and not so good an expectancy as men of high scholarship rank.

12 Most athletes will admit that the combination of weariness and nervousness after a hard practice is not conducive to study. We can thus understand why athleticism does not contribute to the production of well-rounded men destined for leadership after graduation. In many American colleges it is possible for a boy to win twelve letters without learning how to write one. I need only suggest that you conjure up the name of the greatest college football star of fifteen years ago and ask yourself, "Where is he now?" Many of his contemporaries who made no ninety-yard runs enjoy at least as good health as our hero and considerably more esteem. The cheers that rock the stadium have a rapid depreciation rate.

13 The alleged connection between athletic experience and moral principles is highly dubious. At worst, the college athlete is led to believe that whatever he does, including slugging, is done for the sake of alma mater. He does not learn that it is sometimes better, both on and off the playing field, to lose than to win. At best, the college athlete acquires habits of fair play, but there is no evidence that he needs to join the football squad to acquire them; he can get them from the studies he pursues and from living in a college community which, since it is a community of comparatively idealistic people, is less tolerant of meanness than most. The football players who threw the campus "radicals" into the lake at the University of Wisconsin knew little of fair play, and incidents in which free speech in the colleges is suppressed have frequently shown the athletic group lined up on the side of suppression.

14 Even if it were true that athletics developed courage,

prudence, tolerance, and justice, the commercialism that characterizes amateur sport today would be sufficient to harden the purest young man. He is made to feel that his primary function in college is to win football games. The coach demands it, because the coach wants to hold his job. The college demands it, because the college wants the gate receipts. And the alumni demand it, because the test of a college is the success of its teams and they want to be alumni of a good college.

15 The university with which I am connected has a different kind of college and a different kind of alumni. I can make this statement because I am in no way responsible for its happy condition. When John D. Rockefeller founded the University of Chicago forty-five years ago, he told William Rainey Harper to run it as he pleased. It pleased Mr. Harper to appoint men of character and distinction. One of the men he appointed was Amos Alonzo Stagg. To the amazement of the country, Mr. Harper made Mr. Stagg a professor on life appointment. It was the first time such a thing had happened.

16 Secure in his position, whether he produced winning teams or not, Mr. Stagg for forty years kept Chicago an amateur university. Some of his teams were champions. Chicago still has the second best won-and-lost record in the Big Ten, although we are using it up pretty fast. But through all those years Chicago students learned that athletics is only one aspect, and a secondary one, of college education. The result is that today Chicago's alumni are loyal to their university and generous with their moral and financial support.

17 The prestige that winning teams confer upon a university, and the profits that are alleged to accompany prestige, are the most serious obstacles to reform. Alumni whose sole interest in their alma mater is its athletic standing lose their interest when its teams run on bad years. The result, which horrifies college presidents, is that the alumni do not encourage their children or their neighbors' children to attend the old college. The American public believes that there is a correlation between muscle and manliness. Poor teams at any college are supposed to mean that the character of its student body is in decay.

18 The myth that donors, like alumni and the public, are impressed by football victories collapses on examination of the report

recently issued by the John Price Jones Corporation, showing gifts and bequests to colleges and universities between 1920 and 1937. Among the universities, Harvard, Yale and Chicago led the list, each having received more than $50,000,000. The records of these universities on the gridiron were highly irregular, to say the least; that of one of them was positively bad. Among the colleges, Williams, Wesleyan and Bowdoin led the list, each having received more than $5,000,000. Men of wealth were undeterred by the inconsequential athletic status of these colleges; it does not appear that philanthropists were attracted to their rivals by the glorious victories they scored over them.

19 If athleticism is bad for students, players, alumni and the public, it is even worse for the colleges and universities themselves. They want to be educational institutions, but they can't. The story of the famous halfback whose only regret, when he bade his coach farewell, was that he hadn't learned to read and write is probably exaggerated. But we must admit that pressure from trustees, graduates, "friends," presidents, and even professors has tended to relax academic standards. These gentry often overlook the fact that a college should not be interested in a fullback who is a half-wit. Recruiting, subsidizing, and the double educational standard cannot exist without the knowledge and the tacit approval, at least, of the colleges and universities themselves. Certain institutions encourage susceptible professors to be nice to athletes now admitted by paying them for serving as "faculty representatives" on the college athletic board.

20 We have the word of the famous Carnegie Report that the maxim "every athlete is a needy athlete" is applied up and down the land. Hard times have reduced the price of football players in conformity with the stock-market index. But when we get back to prosperity we may hope to see the resurrection of that phenomenon of the Golden Era, a corporation which tried to corner the market by signing up high-school athletes and auctioning them off to the highest bidder. The promoter of this interesting venture came to a bad end, and I regretted his fate, for he was a man of imagination and a friend of the football tramp, who has always been a victim of cutthroat competition.

21 Enthusiastic alumni find it hard to understand why a fine young man who can play football should be deprived of a college

education just because he is poor. No young man should be deprived of an education because he is poor. We need more scholarships, but athletic ability should have nothing to do with their award. Frequently the fine young man the alumnus has in mind can do nothing but play football. The alumnus should try hiring the young man and turning him loose in his factory. From the damage that would result he could gain some insight into the damage done his alma mater through admitting students without intellectual interests or capacity.

22 If the colleges and universities are to commend themselves to the public chiefly through their athletic accomplishments, it seems to me that they ought to be reorganized with that aim in view. Instead of looking for college presidents among educators, we should find them among those gentlemen who have a solid record of sports promotion behind them. Consider what Tex Rickard could have done for Harvard. I am rapidly approaching the retirement age, and I can think of no worthier successor, from the standpoint of athleticism, than Mr. Mike Jacobs, the sage of the prize ring. Mr. Jacobs has demonstrated his genius at selecting young men and developing them in such a way as to gather both gold and glory for the profession of which he is the principal ornament.

23 Another suggestion for elevating Chicago to the level of some of its sister institutions was advanced last year by Mr. William McNeill, editor of the student paper. Mr. McNeill proposed that instead of buying football players, the colleges should buy race horses. Alumni could show their devotion to alma mater by giving their stables to alma mater. For the time being, Yale would be way out in front, for both Mr. Jock Whitney and Mr. Cornelius Vanderbilt Whitney graduated there. But by a judicious distribution of honorary degrees horse fanciers who never went to college might be induced to come to the assistance of institutions which had not attracted students who had become prosperous enough to indulge in the sport of kings. Chicago could, for instance, confer the doctorate of letters upon that prominent turfman, Alderman Bathhouse John Coughlin, and persuade The Bath to change the color of his silks from green to maroon. The alumni could place their money on Chicago across the board. The students could cheer. Most important of all, the horses would not have to pass examinations.

24 The center of football strength has been moving, since the turn of the century, from the East to the Middle West, from the Middle West to the Pacific Coast, and from the Pacific Coast to the South and Southwest. According to a recent analysis by Professor Eells, of Stanford, the leading educational institutions of the country are, in order of their eminence, Harvard, Chicago, Columbia, Yale, California, Johns Hopkins, Princeton, Michigan and Wisconsin. None of these universities, except California, is close to the top of Professor Dickinson's annual athletic ranking, and California's success has something to do with the fact that it has a male undergraduate enrollment of 7500 compared with Harvard's 3700 and Chicago's 1900. We used to say that Harvard enjoyed its greatest years as an educational institution when Ted Coy was playing at Yale. If football continues to move to the poorer colleges, the good ones may be saved. Meanwhile it is only fair to say that some inferior colleges are going broke attempting to get rich—and famous —at football.

25 Athleticism, like crime, does not pay. Last summer St. Mary's College, home of the Galloping Gaels, was sold at auction and bought in by a bondholders' committee. This was the country's most sensational football college. Since 1924 it has won eighty-six and tied seven of its 114 games. Its academic efforts were inexpensive and its gate receipts immense. The bondholders were surprised to learn that it was running $72,000 a year behind in its budget. They were even more surprised to find that football expenses were almost equal to football income.

26 To make big money in athletics you have to spend big money. Winning coaches come high. The head coaches in our larger colleges and universities receive, on the average, $611 a year more than the highest-ranking professors in the same institutions. One famous coach of a small college was found, not long ago, receiving $25,000 in a year, between his salary and his percentage of the receipts. This situation is not without its advantages to the members of my hard-pressed profession. The president of one celebrated university was paid $8000 a year. A coach qualified to direct the football destinies of the institution could not be found for less than $15,000. Since the trustees had to have the coach, and since they couldn't pay the president less than the coach, they raised the president's salary to $15,000 too.

27 Subsidizing is expensive. Equipment, travel, advertising and publicity are expensive. These things have been known to run to $10,000 or $15,000 even in the smaller colleges, for football alone. Some of the more glorious teams carry a Pullman full of newspapermen across the country with them, paying the reporters' expenses.

28 The myth that football receipts support research, education, or even other sports has just been exploded by President Wilkins, of Oberlin. His analysis of football costs in twenty-two typical colleges shows that only two have a surplus of football income over football expense. The twenty others spend on football all they get from football and $1743 apiece a year additional. This is the income on $45,000 of their endowment.

29 President Wilkins' investigation of the colleges raises an interesting question. If most of the colleges lose money at football, is it not likely that most of the universities, with their proportionately heavy expense, are also playing a losing game? I know of only one university that ever claimed to have built a laboratory out of excess gate receipts, but many of our large institutions claim that football finances their so-called minor sports. Perhaps it does in a few universities and in the years of their great teams. But I should like to see a study made of the universities along the lines of President Wilkins' investigation of the colleges; and I might suggest to those who make the study that they scrutinize the accounting methods of some of our educators to see if they are charging up coaches and even trainers as "professors," the purchase of players to "contingent expense," and the debt on the stadium to "real estate."

30 In 1925 the American Association of University Professors expressed the hope that colleges would in time publish the cost of their stadiums. This hope has not been fulfilled, and for the most part the cost of stadiums remains one of the dark secrets of the athletic underworld. I understand that there are only two stadiums in the Big Ten which were not built with borrowed money, and that two have not yet been paid for. One cost $1,700,000.

31 Last fall I met a university president the day before his team was to play its opening game. All he could say was, "We've got to win tomorrow. We've got to pay off that $35,000 on the stadium this year." The necessity of packing these arenas has led colleges to schedule as many big games as possible. In order to establish the

team's value as a spectacle as soon as possible, a big game must be played to open the season. The old scheme of playing easy games until the team is in shape has had to be abandoned. Consequently, practice must begin earlier to get the team in shape earlier. Harvard and Princeton have just extended pre-season practice and have given a bad example to the country.

32 The reason that college stadiums can't be paid off is plain. They are built for one sport, football. A great team year after year might, in fifteen or twenty years, pay off the bond issue. But there are no great teams year after year. Athletic eminence is cyclical. College A has a great team and decides to build a great stadium, so that the entire population can watch it. But the alumni of College B, which is the traditional rival of College A, are irritated because their alma mater is being beaten by those thugs across the river.

33 So the alumni go out and buy a great team for College B. Colleges C and D also have alumni who also like to win.

34 In a few years College A is being beaten regularly and the stadium, except for those local citizens who can't afford to get away to watch B, C, and D, is empty. Then College B builds a great new stadium to cash in on its great new record, and goes through the same routine.

35 There are several factors already operating to reduce athleticism, whether or not we decide to do anything about it. The rise of the junior colleges, which educate freshmen and sophomores only, is reducing the supply of athletic material for the four-year colleges and universities.

36 Professional football, which is attracting larger and larger crowds, may ultimately do for college football what professional baseball has done for college baseball. And the United States Supreme Court, in a case involving the taxation of gate receipts, has clarified the national mind to some extent by indicating that intercollegiate football is business.

37 But neither the Supreme Court, nor professional football, nor the junior colleges can be depended upon to reform us. We must reform ourselves. How?

38 The committees which have studied the subject—and their name is legion—have suggested stricter eligibility rules, reduction of training periods, elimination of recruiting and subsidizing, easier

schedules, limitation of each student's participation to one sport, and abandonment of the double scholastic standard for athletes. President-Emeritus Lowell, of Harvard, once proposed the Oxford and Cambridge system of limiting each sport to one game a season, and that one with the college's natural rival. Mr. Lowell's scheme might have the merit of enabling students and the public to work off their seasonal frenzy in one big saturnalia.

39 These reforms will never achieve reform. They may serve to offset athleticism at those few institutions which are already trying to be colleges instead of football teams. But it is too much to hope that they will affect the colleges and universities at large.

40 Since money is the cause of athleticism, the cure is to take the money out of athletics. This can be done only in defiance of the students, the alumni, the public, and, in many cases, the colleges themselves. The majority of the colleges and universities will not do it, because in the aggregate they dare not. Johns Hopkins, in Maryland, and Reed College, in Oregon, have dared, but nobody cares, athletically speaking, what Johns Hopkins or Reed does.

41 The task of taking the money out of athletics must be undertaken by those institutions which are leaders, institutions which can afford the loss of prestige and popularity involved. I suggest that a group of colleges and of universities composed, say, of Amherst, Williams, Dartmouth, Harvard, Yale, Chicago, Michigan, Stanford and California agree to take the following steps, to take them in unison and to take them at once:

42 1. Reduce admission to ten cents. This will cover the handling costs. For years prominent educators, all the way from Harper, of Chicago, to Butler, of Columbia, have insisted that college athletics should be supported from endowment like any other educational activity. Colleges should support athletics out of their budgets, or get out of athletics, or get out of education.

43 2. Give the director of athletics and the major coaches some kind of academic tenure, so that their jobs depend on their ability as instructors and their character as men and not on the gates they draw.

44 While these two steps are being taken, it might be well, for the sake of once more putting students instead of athletes on the college playing fields, to try to stimulate the urge to play for fun and health, instead of the urge to win at any cost. There are two

ways to do this, and many colleges and universities are trying both with considerable satisfaction to their students:

45 1. Broaden the base of athletic participation, so that all students, graduate and undergraduate, big fellows and little fellows, can play. The development of intramural athletics, which costs less than the maintenance of present programs, is a step in this direction. The English system of selecting a varsity from the intramural teams toward the end of the season and then playing a limited number of intercollegiate games suggests itself at this point.

46 2. Emphasize games which students will play in later life, when they need recreation and physical fitness as much as in college. Such sports are tennis, handball, skating, swimming, softball, bowling, rackets, golf, and touch football. Few college graduates are able to use football, baseball, or basketball, except as topics of conversation.

47 In a word: More athletics, less athleticism.

48 I think that after the steps I have suggested have been taken by the colleges and universities I have named, the rest of the country's educational institutions will not long be able to ignore their example.

49 Nor will the public, once the break has been made, attempt for long to prevent reform. The public, in the last analysis, pays for the colleges and the universities. It wants something for its money. It has been taught to accept football. It can, I am confident, be taught to accept education.

50 The public will not like ten-cent football, because ten-cent football will not be great football. The task of the colleges and the universities, then, is to show the country a substitute for athleticism.

51 That substitute is light and learning. The colleges and universities, which taught the country football, can teach the country that the effort to discover truth, to transmit the wisdom of the race, and to preserve civilization is exciting and perhaps important too.

Discussion

1. Write, in your own words, a sentence which gives the main idea of the article.
2. Discuss the problem of outlining the essay. Would it be hard or easy to outline? Defend your statement.

3. What are the key words—the words which recur in the expression of the major ideas?
4. How does paragraph 9 develop the idea given in paragraph 4?
5. Is the problem as serious as Hutchins says? Will professional football do to the college game what the big leagues have done to college baseball?
6. Do you feel inclined to question any of Hutchins' facts or any of the conclusions he draws? Have changes occurred since Hutchins wrote to invalidate his conclusions?
7. Point out passages in which Hutchins uses ridicule.
8. Do you think that Hutchins' manner of writing is one which would persuade a *Saturday Evening Post* audience?
9. Does the length of the paragraphs indicate that the essay was written for a particular kind of publication and audience? Explain.
10. Examine the first fourteen paragraphs and show how they are linked together by ideas, repetition of key words, pronouns referring to the preceding paragraph, transitional phrases, or other devices.

Writing

Write a theme explaining why you agree or disagree with one or more of Hutchins' ideas.

Discussion of foregoing five essays on higher education

1. Draw up a brief statement of the ideals of education presented in the five essays included on pp. 77–118.
2. Is there conflict among the essays as to the aims of higher education?
3. Which author makes the most satisfactory statement of college objectives? Defend your view.
4. Which author most satisfactorily disposes of misconceptions about higher education?

MORTIMER J. ADLER · *How to Mark a Book*

You know you have to read "between the lines" to get the most out of anything. I want to persuade you to do something equally important in the course of your reading. I want to persuade you to "write between the lines." Unless you do, you are not likely to do the most efficient kind of reading.

I contend, quite bluntly, that marking up a book is not an act of mutilation but of love.

You shouldn't mark up a book which isn't yours. Librarians (or your friends) who lend you books expect you to keep them clean, and you should. If you decide that I am right about the usefulness of marking books, you will have to buy them. Most of the world's great books are available today, in reprint editions, at less than a dollar.

There are two ways in which one can own a book. The first is the property right you establish by paying for it, just as you pay for clothes and furniture. But this act of purchase is only the prelude to possession. Full ownership comes only when you have made it a part of yourself, and the best way to make yourself a part of it is by writing in it. An illustration may make the point clear. You buy a beefsteak and transfer it from the butcher's icebox to your own. But you do not own the beefsteak in the most important sense until you consume it and get it into your bloodstream. I am arguing that books, too, must be absorbed in your bloodstream to do you any good.

Confusion about what it means to *own* a book leads people to a false reverence for paper, binding, and type—a respect for the physical thing—the craft of the printer rather than the genius of the author. They forget that it is possible for a man to acquire the idea, to possess the beauty, which a great book contains, without staking his claim by pasting his bookplate inside the cover. Having a fine library doesn't prove that its owner has a mind enriched by books; it proves nothing more than that he, his father, or his wife, was ~~rich~~ enough to buy them.

—Reprinted from *The Saturday Review of Literature,* July 6, 1940, by permission of *The Saturday Review* and Mortimer J. Adler.

There are three kinds of book owners. The first has all the standard sets and best-sellers—unread, untouched. (This deluded individual owns wood-pulp and ink, not books.) The second has a great many books—a few of them read through, most of them dipped into, but all of them as clean and shiny as the day they were bought. (This person would probably like to make books his own, but is restrained by a false respect for their physical appearance.) The third has a few books or many—every one of them dog-eared and dilapidated, shaken and loosened by continual use, marked and scribbled in from front to back. (This man owns books.)

Is it false respect, you may ask, to preserve intact and unblemished a beautifully printed book, an elegantly bound edition? Of course not. I'd no more scribble all over a first edition of "Paradise Lost" than I'd give my baby a set of crayons and an original Rembrandt! I wouldn't mark up a painting or a statue. Its soul, so to speak, is inseparable from its body. And the beauty of a rare edition or of a richly manufactured volume is like that of a painting or a statue.

But the soul of a book *can* be separated from its body. A book is more like the score of a piece of music than it is like a painting. No great musician confuses a symphony with the printed sheets of music. Arturo Toscanini reveres Brahms, but Toscanini's score of the C-minor Symphony is so thoroughly marked up that no one but the maestro himself can read it. The reason why a great conductor makes notations on his musical scores—marks them up again and again each time he returns to study them—is the reason why you should mark your books. If your respect for magnificent binding or typography gets in the way, buy yourself a cheap edition and pay your respects to the author.

Why is marking up a book indispensable to reading it? First, it keeps you awake. (And I don't mean merely conscious; I mean wide awake.) In the second place, reading, if it is active, is thinking, and thinking tends to express itself in words, spoken or written. The marked book is usually the thought-through book. Finally, writing helps you remember the thoughts you had, or the thoughts the author expressed. Let me develop these three points.

If reading is to accomplish anything more than passing time, it must be active. You can't let your eyes glide across the lines of a book and come up with an understanding of what you have read. Now an ordinary piece of light fiction, like, say, "Gone with the Wind," doesn't require the most active kind of reading. The books you read for pleasure can be read in a state of relaxation, and nothing is lost. But a great book, rich in ideas and beauty, a book that raises and tries to answer great fundamental questions, demands the most active reading of which you are capable. You don't absorb the ideas of John Dewey the way you absorb the crooning of Mr. Vallee. You have to reach for them. That you cannot do while you're asleep.

If, when you've finished reading a book, the pages are filled with your notes, you know that you read actively. The most famous *active* reader of great books I know is President Hutchins, of the University of Chicago. He also has the hardest schedule of business activities of any man I know. He invariably reads with a pencil, and sometimes, when he picks up a book and pencil in the evening, he finds himself, instead of making intelligent notes, drawing what he calls "caviar factories" on the margins. When that happens, he puts the book down. He knows he's too tired to read, and he's just wasting time.

But, you may ask, why is writing necessary? Well, the physical act of writing, with your own hand, brings words and sentences more sharply before your mind and preserves them better in your memory. To set down your reaction to important words and sentences you have read, and the questions they have raised in your mind, is to preserve those reactions and sharpen those questions.

Even if you wrote on a scratch pad, and threw the paper away when you had finished writing, your grasp of the book would be surer. But you don't have to throw the paper away. The margins (top and bottom, as well as side), the end-papers, the very space between the lines, are all available. They aren't sacred. And, best of all, your marks and notes become an integral part of the book and stay there forever. You can pick up the book the following week or year, and there are all your points of agreement, disagreement, doubt, and inquiry. It's like resuming an interrupted conversation with the advantage of being able to pick up where you left off.

And that is exactly what reading a book should be: a conversation between you and the author. Presumably he knows more about the subject than you do; naturally, you'll have the proper humility as you approach him. But don't let anybody tell you that a reader is supposed to be solely on the receiving end. Understanding is a two-way operation; learning doesn't consist in being an empty receptacle. The learner has to question himself and question the teacher. He even has to argue with the teacher, once he understands what the teacher is saying. And marking a book is literally an expression of your differences, or agreements of opinion, with the author.

There are all kinds of devices for marking a book intelligently and fruitfully. Here's the way I do it:

1. *Underlining:* of major points, of important or forceful statements.

2. *Vertical lines at the margin:* to emphasize a statement already underlined.

3. *Star, asterisk, or other doo-dad at the margin:* to be used sparingly, to emphasize the ten or twenty most important statements in the book. (You may want to fold the bottom corner of each page on which you use such marks. It won't hurt the sturdy paper on which most modern books are printed, and you will be able to take the book off the shelf at any time and, by opening it at the folded-corner page, refresh your recollection of the book.)

4. *Numbers in the margin:* to indicate the sequence of points the author makes in developing a single argument.

5. *Numbers of other pages in the margin:* to indicate where else in the book the author made points relevant to the point marked; to tie up the ideas in a book, which, though they may be separated by many pages, belong together.

6. *Circling of key words or phrases.*

7. *Writing in the margin, or at the top or bottom of the page, for the sake of:* recording questions (and perhaps answers) which a passage raised in your mind; reducing a complicated discussion to a simple statement; recording the sequence of major points right through the book. I use the end-papers at the back of the book to make a personal index of the author's points in the order of their appearance.

The front end-papers are, to me, the most important. Some people reserve them for a fancy bookplate. I reserve them for fancy thinking. After I have finished reading the book and making my personal index on the back end-papers, I turn to the front and try to outline the book, not page by page, or point by point (I've already done that at the back), but as an integrated structure, with a basic unity and an order of parts. This outline is, to me, the measure of my understanding of the work.

If you're a die-hard anti-book-marker, you may object that the margins, the space between the lines, and the end-papers don't give you room enough. All right. How about using a scratch pad slightly smaller than the page-size of the book—so that the edges of the sheets won't protrude? Make your index, outlines, and even your notes on the pad, and then insert these sheets permanently inside the front and back covers of the book.

Or, you may say that this business of marking books is going to slow up your reading. It probably will. That's one of the reasons for doing it. Most of us have been taken in by the notion that speed of reading is a measure of our intelligence. There is no such thing as the right speed for intelligent reading. Some things should be read quickly and effortlessly, and some should be read slowly and even laboriously. The sign of intelligence in reading is the ability to read different things differently according to their worth. In the case of good books, the point is not to see how many of them you can get through, but rather how many can get through you—how many you can make your own. A few friends are better than a thousand acquaintances. If this be your aim, as it should be, you will not be impatient if it takes more time and effort to read a great book than it does a newspaper.

You may have one final objection to marking books. You can't lend them to your friends because nobody else can read them without being distracted by your notes. Furthermore, you won't want to lend them because a marked copy is a kind of intellectual diary, and lending it is almost like giving your mind away.

If your friend wishes to read your "Plutarch's Lives," "Shakespeare," or "The Federalist Papers," tell him gently but firmly, to buy a copy. You will lend him your car or your coat—but your books are as much a part of you as your head or your heart.

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S. I. HAYAKAWA · *Contexts*

[On being asked to define New Orleans jazz]: "Man, when you got to ask what it is, you'll never get to know."

Louis Armstrong

Dictionary definitions frequently offer verbal substitutes for an unknown term which only conceal a lack of real understanding. Thus a person might look up a foreign word and be quite satisfied with the meaning "bullfinch" without the slightest ability to identify or describe this bird. Understanding does not come through dealings with words alone, but rather with the things for which they stand. Dictionary definitions permit us to hide from ourselves and others the extent of our ignorance.

H. R. Huse[1]

How Dictionaries Are Made

It is an almost universal belief that every word has a correct meaning, that we learn these meanings principally from teachers and grammarians (except that most of the time we don't bother to, so that we ordinarily speak "sloppy English"), and that dictionaries and grammars are the supreme authority in matters of meaning and usage. Few people ask by what authority the writers of dictionaries and grammars say what they say. The docility with which most people bow down to the dictionary is amazing, and the person who says, "Well, the dictionary is wrong!" is looked upon as out of his mind.

Let us see how dictionaries are made and how the editors arrive at definitions. What follows applies, incidentally, only to those dictionary offices where first-hand, original research goes on —not those in which editors simply copy existing dictionaries. The task of writing a dictionary begins with the reading of vast amounts of the literature of the period or subject that it is intended to cover. As the editors read, they copy on cards every interesting or rare

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[1] From *The Illiteracy of the Literate*, by H. R. Huse, copyright 1933. Reprinted by permission of Appleton-Century-Crofts, Inc.

word, every unusual or peculiar occurrence of a common word, a large number of common words in their ordinary uses, and also the sentences in which each of these words appears, thus:

pail
The dairy *pails* bring home increase of milk

Keats, *Endymion*
I, 44–45

That is to say, the context of each word is collected, along with the word itself. For a really big job of dictionary writing, such as the *Oxford English Dictionary* (usually bound in about twenty-five volumes), millions of such cards are collected, and the task of editing occupies decades. As the cards are collected, they are alphabetized and sorted. When the sorting is completed, there will be for each word anywhere from two to three to several hundred illustrative quotations, each on its card.

To define a word, then, the dictionary editor places before him the stack of cards illustrating that word; each of the cards represents an actual use of the word by a writer of some literary or historical importance. He reads the cards carefully, discards some, rereads the rest, and divides up the stack according to what he thinks are the several senses of the word. Finally, he writes his definitions, following the hard-and-fast rule that each definition *must* be based on what the quotations in front of him reveal about the meaning of the word. The editor cannot be influenced by what *he* thinks a given word *ought* to mean. He must work according to the cards, or not at all.

The writing of a dictionary, therefore, is not a task of setting up authoritative statements about the "true meanings" of words, but a task of *recording*, to the best of one's ability, what various words *have meant* to authors in the distant or immediate past. *The writer of a dictionary is a historian, not a law-giver.* If, for example, we had been writing a dictionary in 1890, or even as late as 1919, we could have said that the word "broadcast" means "to scatter" (seed and so on) but we could not have decreed that from 1921 on, the commonest meaning of the word should become "to disseminate audible messages, etc., by wireless telephony." To regard the dictionary as an "authority," therefore, is to credit the dictionary writer with gifts of prophecy which neither he nor anyone else possesses. In choosing our words when we speak or write, we can be *guided* by the historical record afforded us by the dictionary, but we cannot be *bound* by it, because new situations, new experiences, new inventions, new feelings, are always compelling us to give new uses to old words. Looking under a "hood," we should ordinarily have found, five hundred years ago, a monk; today, we find a motorcar engine.

Verbal and Physical Contexts

The way in which the dictionary writer arrives at his definitions is merely the systematization of the way in which we all learn the meanings of words, beginning at infancy, and continuing for the rest of our lives. Let us say that we have never heard the word "oboe" before, and we overhear a conversation in which the following sentences occur:

> He used to be the best *oboe* player in town. . . . Whenever they came to that *oboe* part in the third movement, he used to get very excited. . . . I saw him one day at the music shop, buying a new reed for his *oboe*. . . . He never liked to play the clarinet after he started playing the *oboe*. . . . He said it wasn't so much fun, because it was too easy.

Although the word may be unfamiliar, its meaning becomes clear to us as we listen. After hearing the first sentence, we know that an "oboe" is "played," so that it must be either a game or a musical instrument. With the second sentence the possibility of its being a game is eliminated. With each succeeding sentence the possibilities as to what an "oboe" may be are narrowed down until we get a fairly clear idea of what is meant. This is how we learn by *verbal context.*

But even independently of this, we learn by physical and social context. Let us say that we are playing golf and that we have hit the ball in a certain way with certain unfortunate results, so that our companion says to us, "That's a bad *slice.*" He repeats this remark every time our ball fails to go straight. If we are reasonably bright, we learn in a very short time to say, when it happens again, "That's a bad slice." On one occasion, however, our friend says to us, "That's not a *slice* this time; that's a *hook.*" In this case we consider what has happened, and we wonder what is different about the last stroke from those previous. As soon as we make the distinction, we have added still another word to our vocabulary. The result is that after nine holes of golf, we can use both these words accurately—and perhaps several others as well, such as "divot," "number-five iron," "approach shot," *without ever having been told what they mean.* Indeed, we may play golf for years without ever being able to give a dictionary definition of "to slice": "To strike (the ball) so that the face of the club draws inward across the face of the ball, causing it to curve toward the right in flight (with a right-handed player)" (*Webster's New International Dictionary*). But even without being able to give such a definition, we should still be able to use the word accurately whenever the occasion demanded.

We learn the meanings of practically all our words (which are, it will be remembered, merely complicated noises), not from dictionaries, not from definitions, but from hearing these noises as they accompany actual situations in life and learning to associate certain noises with certain situations. Even as dogs learn to recognize "words," as for example by hearing "biscuit" at the same time as an actual biscuit is held before their noses, so do we all learn to interpret language by being aware of the happenings that accompany the noises people make at us—by being aware, in short, of contexts.

The definitions given by little children in school show clearly how they associate words with situations; they almost always define in terms of physical and social contexts: "Punishment is when you have been bad and they put you in a closet and don't let you have any supper." "Newspapers are what the paper boy brings and you wrap up the garbage with it." These are good definitions. The main reason that they cannot be used in dictionaries is that they are *too* specific; it would be impossible to list the myriads of situations in which every word has been used. For this reason, dictionaries give definitions on a high level of abstraction; that is, with particular references left out for the sake of conciseness. This is another reason why it is a great mistake to regard a dictionary definition as telling us all about a word.

Extensional and Intensional Meaning

From this point on, it will be necessary to employ some special terms in talking about meaning: *extensional meaning,* which will also be referred to as *denotation,* and *intensional meaning*—note the *s*—which will also be referred to as *connotation.* Briefly explained, the extensional meaning of an utterance is that which it *points to* or denotes in the extensional world. . . . That is to say, the extensional meaning is something that *cannot be expressed in words,* because it is that which words stand for. An easy way to remember this is to put your hand over your mouth and point whenever you are asked to give an extensional meaning.

The *intensional meaning* of a word or expression, on the other hand, is that which is *suggested* (connoted) inside one's head. Roughly speaking, whenever we express the meaning of words by uttering more words, we are giving intensional meaning, or connotations. To remember this, put your hand over your eyes and let the words spin around in your head.

Utterances may have, of course, both extensional and intensional meaning. If they have no intensional meaning at all—that is, if they start no notions whatever spinning about in our heads—they are meaningless noises, like foreign languages that we do not understand. On the other hand, it is possible for utterances to have no extensional meaning at all, in spite of the fact that they may start many notions spinning about in our heads. The statement, "Angels watch over my bed at night," is one that has intensional but no extensional meaning. This does not mean that there are no angels watching over my bed at night. When we say that the statement has no extensional meaning, we are merely saying that we cannot see, touch, photograph, or in any scientific manner detect the presence of angels. The result is that, if an argument begins on the subject whether or not angels watch over my bed, *there is no way of ending the argument to the satisfaction of all disputants,* the Christians and the non-Christians, the pious and the agnostic, the mystical and the scientific. Therefore, whether we believe in angels or not, knowing in advance that any argument on the subject will be both endless and futile, we can avoid getting into fights about it.

When, on the other hand, statements have extensional content, as when we say, "This room is fifteen feet long," arguments can come to a close. No matter how many guesses there are about the length of the room, all discussion ceases when someone produces a tape measure. This, then, is the important difference between extensional and intensional meanings: namely, when utterances have extensional meanings, discussion can be ended and agreement reached; when utterances have intensional meanings only and no extensional meanings, arguments may, and often do, go on indefinitely. Such arguments can result only in irreconcilable conflict. Among individuals, they may result in the breaking up of friendships; in society, they often split organizations into bitterly opposed groups; among nations they may aggravate existing tensions so seriously as to become real obstacles to the peaceful settling of disputes.

Arguments of this kind may be termed "non-sense arguments," because they are based on utterances about which no sense data can be collected. Needless to say, there are occasions when the hyphen may be omitted—that depends on one's feelings toward the particular argument under consideration. The reader is requested to provide his own examples of "non-sense arguments." Even the foregoing example of the angels may give offense to some people, in spite of the fact that no attempt is made to deny or affirm the existence of angels. He can imagine, therefore, the uproar that might result from giving a number of examples, from theology, politics, law, economics, literary criticism, and other fields in which it is not customary to distinguish clearly sense from non-sense.

The "One Word, One Meaning" Fallacy

Everyone, of course, who has ever given any thought to the meanings of words has noticed that they are always shifting and changing in meaning. Usually, people regard this as a misfortune, because it "leads to sloppy thinking" and "mental confusion." To remedy this condition, they are likely to suggest that we should all agree on "one meaning" for each word and use it only with that meaning. Thereupon it will occur to them that we simply cannot make people agree in this way, even if we could set up an ironclad dictatorship under a committee of lexicographers who would place censors in every newspaper office and microphones in every home. The situation, therefore, appears hopeless.

Such an impasse is avoided when we start with a new premise altogether—one of the premises upon which modern linguistic thought is based: namely, that *no word ever has exactly the same meaning twice.* The extent to which this premise fits the facts can be demonstrated in a number of ways. First, if we accept the proposition that the contexts of an utterance determine its meaning, it becomes apparent that since no two contexts are ever *exactly* the same, no two meanings can ever be exactly the same. How can we "fix the meaning" even for as common an expression as "to believe in" when it can be used in such sentences as the following:

> I *believe in* you (I have confidence in you).
> I *believe in* democracy (I accept the principles implied by the term democracy).
> I *believe in* Santa Claus (It is my opinion that Santa Claus exists).

Secondly, we can take, for example, a word of "simple" meaning like "kettle." But when John says "kettle," its intensional meanings to him are the common characteristics of all the kettles John remembers. When Peter says "kettle," however, its intensional meanings to him are the common characteristics of all the kettles he remembers. *No matter how small or how negligible the differences may be between John's "kettle" and Peter's "kettle," there is some difference.*

Finally, let us examine utterances in terms of extensional meanings. If John, Peter, Harold, and George each say "my typewriter," we would have to point to four different typewriters to get the extensional meaning in each case; John's new Underwood, Peter's old Corona, Harold's L. C. Smith, and the undenotable intended "typewriter" that George plans some day to buy: "My typewriter, when I buy one, will be a noiseless." Also, if John says "my typewriter" today, and again "my typewriter" tomorrow, the extensional meaning is different in the two cases, because the typewriter is not exactly the same from one day to the next (nor from one minute to the next): slow processes of wear, change, and decay are going on constantly. Although we can say, then, that the differences in the meanings of a word on one occasion, on another occasion a minute later, and on still another occasion another minute later, are negligible, we cannot say that the meanings are *exactly* the same.

To say dogmatically that we know what a word means *in advance of its utterance* is nonsense. All we can know in advance is *approximately* what it will mean. After the utterance, we interpret what has been said in the light of both verbal and physical contexts, and act according to our interpretation. An examination of the verbal context of an utterance, as well as the examination of the utterance itself, directs us to the intensional meanings; an examination of the physical context directs us to the extensional meanings. When John says to James, "Bring me that book, will you?" James looks in the direction of John's pointed finger (physical context) and sees a desk with several books on it (physical context); he thinks back over their previous conversation (verbal context) and knows which of those books is being referred to.

Interpretation *must* be based, therefore, on the totality of contexts. If it were otherwise, we should not be able to account for the fact that even if we fail to use the right (customary) words in some situations, people can very frequently understand us. For example:

> A: Gosh, look at that second baseman go!
> B (looking): You mean the shortstop?
> A: Yes, that's what I mean.

> A: There must be something wrong with the oil line; the engine has started to balk.
> B: Don't you mean "gas line"?
> A: Yes—didn't I say gas line?

Contexts sometimes indicate so clearly what we mean that often we do not even have to say what we mean in order to be understood.

The Ignoring of Contexts

It is clear, then, that the ignoring of contexts in any act of interpretation is at best a stupid practice. At its worst, it can be a vicious practice. A common example is the sensational newspaper story in which a few words by a public personage are torn out of their context and made the basis of a completely misleading account. There is the incident of an Armistice Day speaker, a university teacher, who declared before a high-school assembly that the Gettysburg Address was "a powerful piece of propaganda." The context clearly revealed that "propaganda" was being used according to its dictionary meanings rather than according to its popular meanings; it also revealed that the speaker was a very great admirer of Lincoln's. However, the local newspaper, completely ignoring the context, presented the account in such a way as to convey the impression that the speaker had called Lincoln a liar. On this basis, the newspaper began a campaign against the instructor. The speaker remonstrated with the editor of the newspaper, who replied, in effect, "I don't care what else you said. You said the Gettysburg Address was propaganda, didn't you?" This appeared to the editor complete proof that Lincoln had been maligned and that the speaker deserved to be discharged from his position at the university. Similar practices may be found in advertisements. A reviewer may be quoted on the jacket of a book as having said, "A brilliant work," while reading of the context may reveal that what he really said was, "It just falls short of being a brilliant work." There are some people who will always be able to find a defense for such a practice in saying, "But he did use the words, 'a brilliant work,' didn't he?"

People in the course of argument very frequently complain about words meaning different things to different people. Instead of complaining, they should accept it as a matter of course. It would be startling indeed if the word "justice," for example, were to have the same meaning to the nine justices of the United States Supreme Court; we should get nothing but unanimous decisions. It would be even more startling if "justice" meant the same to President Truman as to Joseph Stalin. If we can get deeply into our consciousness the principle that no word ever has the same meaning twice, we will develop the habit of automatically examining contexts, and this enables us to understand better what others are saying. As it is, however, we are all too likely, when a word sounds familiar, to assume that we understand it even if we don't. In this way we read into people's remarks meanings that were never intended. Then we waste energy in angrily accusing people of "intellectual dishonesty" or "abuse of words," when their only sin is that they use words in ways unlike our own, as they can hardly help doing, especially if their background has been widely different from ours. There are cases of intellectual dishonesty and the abuse of words, of course, but they do not always occur where people think they do.

In the study of history or of cultures other than our own, contexts take on special importance. To say, "There was no running water or electricity in the house," does not condemn an English house in 1570, but says a great deal against a house in Chicago in 1949. Again, if we wish to understand the Constitution of the United States, it is not enough, as our historians now tell us, merely to look up all the words in the dictionary and to read the interpretations written by Supreme Court justices. We must see the Constitution in its historical context: the conditions of life, the current ideas, the fashionable prejudices, and the probable interests of the people who drafted the Constitution. After all, the words "The United States of America" stood for quite a different-sized nation and a different culture in 1790 from what they stand for today. When it comes to very big subjects, the range of contexts to be examined, verbal, social, and historical, may become very large indeed.

The Interaction of Words

All this is not to say, however, that the reader might just as well throw away his dictionary, since contexts are so important. Any word in a sentence—any sentence in a paragraph, any paragraph in a larger unit—whose meaning is revealed by its context, is itself a part of the context of the rest of the text. To look up a word in a dictionary, therefore, frequently explains not only that word itself, but the rest of the sentence, paragraph, conversation, or essay in which it is found. All words within a given context interact upon one another.

Realizing, then, that the dictionary is a historical work, we should understand the dictionary thus: "The word *mother* has most frequently been used in the past among English-speaking people to indicate a female parent." From this we can safely infer, "If that is how it has been used, that is what it *probably* means in the sentence I am trying to understand." This is what we normally do, of course; after we look up a word in the dictionary, we examine the context to see if the definition fits. If the context reads, "Mother began to form in the bottle," one may have to look at the dictionary more carefully.

A dictionary definition, therefore, is an invaluable guide to interpretation. Words do not have a single "correct meaning"; they apply to groups of similar situations, which might be called *areas of meaning*. It is for definition in terms of areas of meaning that a dictionary is useful. In each use of any word, we examine the particular context and the extensional events denoted (if possible) to discover the *point* intended within the area of meaning.

Discussion

1. According to Hayakawa, what is necessary to the understanding of words? Why does the dictionary fail to supply all the data necessary to grasping the meanings of words?
2. Give some examples of words which cannot be completely understood on the basis of dictionary definitions.
3. Give some examples of the way in which you learned words from their contexts: in a sport, a hobby, a field of learning, or a particular kind of work.

MARGARET SCHLAUCH · *Semantics: Vocabulary in Motion*

Extending the Use of Words

Among the words first taught to children by their doting parents are the terms for the parts of the human body. Pressing down the diminutive button-like protuberance which shows signs of one day becoming a full-blown human nose, mama asks beguilingly: "What is this?" The child, shrewd and skilled already in the enormous task of humoring grown-ups, but nevertheless somewhat confused by the rain of new terminology about him, looks up cooperatively and suggests with hope but little conviction: "Baby's

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ear." "Oh, no!" the mellifluous voice proceeds, while the pressure is still maintained, "Baby's nose. *Nose!*" And so the baffling epithet is learned, presumably for a lifetime.

Now "nose" is a concrete term which will cause the child little trouble once he learns it, especially so long as he limits it to this bodily member of himself and his fellow human beings. He can even apply it to the corresponding members of familiar animals without being involved in confusion of meaning. This is also true of other members, such as eyes, ears, hands, elbows, knees, feet, and the rest. These elementary physiological identifications must give him a comfortable sense that things mean what they say. If we wish to amuse ourselves by speculating on the kinds of words which originated first in human speech, there is some reason for surmising that names for our bodily parts were among them.

But very soon in the life of a child comes the experience of metaphoric use. He is watching his mother peeling potatoes, and begins to be aware of their shape and texture. Pointing to the buds visible on the surface of the brown tuber he asks: "Mama, what are these?" She replies: "The eyes of the potato." This designation is unhesitatingly accepted. In the first place, the elliptical depressions surrounding potato buds actually resemble human eye-sockets in shape. There is enough physical similarity to make the poetic image acceptable in place of a name. Besides, the child is in no position—as yet—to observe the difference in functioning between vegetables and animals which would cause him to challenge the existence of eyes in a potato: real eyes, that is, with a potential power of vision. He can hardly ask: "But has the potato a nervous system?!" He still lives in the mysterious, animistic world of fairy-tales, in which sticks and stones, knives and forks, tables and chairs possess souls. In such a world inanimate objects may confidently be expected to see and hear, to bless and curse, and in general to take definite attitudes of friendliness or hostility to little boys and girls. So it is not surprising if he pursues the subject of the potato-sprouts further and poses the (for him) quite logical question: "Then the Potato-man can *see* me?" This very plausible deduction is probably hailed by the mother with inner exultant glee. And aloud she may even go so far as to say: "Yes, if you're not good, the Potato-man will see you, *even in the dark* and at night he'll come for you, and *take you away. . . .*"

Thus metaphor is elevated into mythology. Fortunately for most children, these transparent lies are recognized at an early date. The slight change of tone that betrays them only complicates a bit more the day-long task of placating grown-ups. If the demonology of potatoes is taken too seriously, however, the results may be very serious. Those who have dealt with nervously maladjusted children are no doubt aware of the precise dangers involved. Considering the crude animism of the language surrounding children, it is a wonder that any of us escape undamaged!

Metaphoric Extension

When the bud of a potato is called an "eye," the designation is a metaphor. Physical similarity causes a transfer of an epithet originally clear, limited, and concrete in its application. A *semantic shift* has occurred, known as a simple transfer of meaning. It is useless to debate whether "eye" in the new context is a *new* word (in which case it should have been discussed under vocabulary and the creation of words) or not. In any event the application of the physical sound-symbol [ai] has widened. This is the extension of words to include new referents somehow resembling the original ones. Metaphor implies the perception of such resemblances. By means of this process meanings of words are constantly broadening and shifting. Here are some everyday examples:

Parts of the body are further used in references to many things which are themselves concrete and familiar. We speak of the "lip" and the "ears" of a cup, the "teeth" of a saw or a comb, the "legs" of tables and other immobile articles of furniture, the "elbows" of pipes and macaroni, the "hands" of a clock, the "tongue" of a balance or a bell, the "eye" of a needle, and the "head" of a hammer. When we travel we encounter the "foot" of a mountain, the "mouth" of a river, a "head"-land, the "shoulders"—even the "soft shoulders"—of a road, the "brow" of a hill, and the "neck" of the woods. The German speaks eloquently of a *Meeresbusen* ("bosom" of the sea or gulf). Slightly disguised from us today are the "core" (heart) of an apple—a Romance word; and "axle" (shoulder) of a wheel—cognate with German *Achsel*. In politics we hear of a "rump" session of parliament and a "head" of the state. Perhaps "ward-heeler" may be included here, though it is actually a compound.

Animal names and animal members appear in many of the least regarded units of our discourse. We have "wing" chairs and collars, clothes "horses," darning "eggs" and also "egg"-plants, the "fangs" of a machine, "goose-neck" lamps, "hare" lips, "rats" of hair. The last is, to be sure, dated; it was current only in the days when women wore pads of artificial hair to eke out what nature had given them. We refer ambiguously enough to the "cock" of a water-tap, the "beak" of a vessel, and the "crest" of a hill or wave. "Catspaw" is more than a descriptive designation of an object similar to something else, and so presumably is "monkey wrench." Value judgments are tied up with both of these.

Plants and their parts give us the "nut" of a screw, a shoe "tree," the "stem" of a glass, and the "root" of a tooth or a cancerous growth. When we talk of the "root of the matter" we are already moving on a higher level of abstraction.

Tools and simple inventions have long supplied names for similar objects elsewhere. Carpentry and engineering use "pin" for very solid joiners; "table"-land (Spanish *mesa*) refers to plateaus; valleys have "cups"; roads and trees have "forks"; the arid section of the United States is called the "Dust Bowl." The parts of the human body are often described by simple figures taken from engineering. Thus we have the "bridge" of the nose, the "arch" of the foot, the "roof" of the mouth, the "canal" of a tooth. In addition there are vocal "cords," eye "lids," and "club" feet. Simple metaphor even furnished the names of three small bones in the middle ear: "hammer," "anvil," and "stirrup," and the ear "drum" itself. Parts of musical instruments are described in terms of simpler tools: pianos have "hammers" and "keys," violins have "bridges" and "bows" in a sense unknown to primitive warriors.

All workers in special crafts can surely augment this list. What has happened is of course that an elementary similarity in external aspect has caused a shift of the word to a new function.

Other shifts occur when words having to do with time relations are applied to space, or the reverse. Sometimes it is hard to tell which came first. We say "The tree stands *before* my house" and also "I did this *before* the spring house cleaning." Presumably one is a metaphoric application of the other. We transfer words describing impressions from one of the five senses, to make them apply to others. So it is quite usual to talk of a "sharp" tone, a "flat" taste, a "shrill" color, a "smooth" sensation of any sort. Finally, any of these physical terms can readily be applied to psychological states. "Bitter" grief is the kind that *bites* ("how sharper than a serpent's tooth . . ."); "anguish" is the kind that strangles, for the word is cognate with German *eng* and Latin *angustus* meaning "narrow, constricted." "Dreary" once meant "falling" or "dripping." Colors are taken to designate attributes of character: "He's *yellow*," or "That's mighty *white* of you" (regional U.S.A. dialect) in English. German has *einem grün sein* (with negatives), meaning to be devoted to someone; and Russian uses derivatives of the word *krasnyi* (red) for adjectives to express pleasure and approbation. (This, by the way, has nothing to do with politics. It is an old semantic shift no doubt connected with that preference for bright colors evinced in peasant embroideries and woodwork.)

When these rather elemental shifts occur it is easy to trace their course and to understand their cause. Some, however, are the result of more intricate psychological readjustments.

Communication and Misunderstanding

Two human beings who talk together are accomplishing an act of "communication," as we defined it in the first chapter. Since the effort succeeds so well in most cases, we are apt to forget that the act is and must always be an approximation. To each of his friends, even to his closest *alter ego,* a man talks out of a private world of his own: the sum total of his memories and experiences. Persons strongly attracted to each other by the emotions are prone to attempt a more intimate approaching of the two worlds, so that by some kind of magic extension of personality each one may reach back into the early days of the other and build the same structure of experience. But despite the torrents of eloquence with which the miracle is sometimes attempted, the isolation remains a dreary fact.

The reason is simple. It is impossible for any two persons ever to have learned the same word under precisely the same circumstances; occupying, as it were, the same space in time, and apprehending the new term with precisely the same background. Therefore each will take it into his consciousness ringed about with a special context of associations, differing from the associations of everyone else hearing it. This is what Hermann Paul means when he says that each linguistic creation—and re-creation—is and remains the work of an individual. Yet procedures repeat themselves and approximations of understanding do occur. Our speech is a compromise between the ultimate incommunicability of one person with another and the conventional communication values attached to certain symbols.

Words and References

Let us pause a moment to analyze what happens to us in normal conversation when we employ terms for things. Suppose the subject talked about is a spider. When the word is pronounced the sounds will call up in the mind of the listener a general background of experience, not always very vivid, and not always involving a sharp photographic image of remembered spiders. The background of experience in the listener's mind is called by some writers the *reference,* as distinguished from the *referent,* or the real spider existing in the world outside ourselves. It is important to keep the three elements in the situation quite distinct:

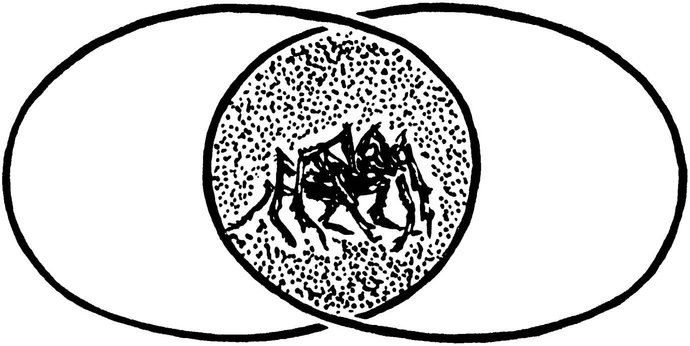
> The *word,* which is merely a symbol made up of sounds, like [ˈspaidə(ɹ)];
> The *referent,* or concrete object (a living animal);
> The *reference,* or recalled experience of past spiders evoked in the mind of the listener.

Under certain circumstances, however, an extremely vivid image is recalled in connection with a given word. The reference is sharpened. This happens especially when the referent is associated with a strong emotion like love or fear. But the same stimulus, the spoken word [ˈspaidə(ɹ)], may produce nothing but a vague reference in one listener while it evokes a sharp one in another. Their experiences are by no means identical.

Emotional Associations

For instance: when I first learned the word "spider," the circumstances were apparently tranquil. I had no cause for alarm, and my attention, so far as I recall, was chiefly captivated by the spinning activities of the creature. The word had no sinister connotations for me. A playmate of mine in those early days, however, must have learned the word under terrifying circumstances. She was never able to recall them or convey them to me in any way; but the mere pronunciation of the word (not to speak of the sight of an actual arachnidan creature) was enough to induce symptoms of panic amounting almost to a fit. If emotions may strongly color the reference of "spider," they may do so to some slight degree with less concrete terms such as "isosceles triangle." There is the illuminating story of a little girl who, having recently learned to read, was spelling out a political article in the newspaper. "Father," she asked, "what is Tammany Hall?" And father replied in the voice usually reserved for the taboos of social communication, "You'll understand that when you grow up, my dear." Acceding to this adult whim of evasion, she desisted from her inquiries; but something in Daddy's tone had convinced her that Tammany Hall must be connected with illicit *amour,* and for many years she could not hear this political institution mentioned without experiencing a secret non-political thrill. Another high school girl reports that the phrase "plane geometry" was first introduced to her in a context of deprecation, as applying to a science much less exciting and esoteric than something else (presumably "solid" geometry). So for a long time she understood "plane" in the sense of "plain"—a semantic confusion heightened by the homonyms of identical origin —appropriate for an unadorned Cinderella among the mathematical sisters; and it was only much later that she realized with a shock that the key word applied quite colorlessly to (imaginary) surfaces, having nothing to do with beauty or complexity.

With such varieties of individual experience in relation to words, there arise all sorts of *connotations,* as they are called, or nuances of association around the accepted factual definition. Some connotations (like the erotic aura around Tammany Hall for the little girl of our anecdote) remain strictly private and individual, the results of special accidents; others are coincidental for many persons and hence become currently attached to the word. If the sound-symbol is "spider," the situation can be thus represented (*see page 142*). The unshaded sections in the ellipse of associations represent the special and private associations of the word due to the accidents of individual experience; the shaded portion represents a common store of connotations (tactile impressions approximately the same for anyone who has ever felt an arachnid crawl over his shin, generally current anecdotes or superstitions about spiders, etc.) In the heart of the overlapping associations is the word in its scientific sense: a designation of a biological type by (so far as possible) a colorless, unemotional scientific label. Even the label is a mere approximation of completely scientific denotation. The connotations cannot be kept away entirely, even from the abstract terms.



Changes in Meaning

The shaded matter of our diagram differs in all experiences of speaking and listening. The shifts and instabilities may be great or little, but they exist. When repeated experiences tend to push the territory of common connotations generally in the same directions, a change in meaning will occur. The semantic development is often gradual, but it may end in a great transformation of meaning eventually. The general direction of the change will be determined by the prejudices, preoccupations, and interests prevailing over others in the community of speakers. Social tendencies appear more clearly in semantic than in phonetic change. This will be demonstrated more than once in the special types of change cited.

Pejorative change is one of the commonest and most readily observed. It means a degeneration in meaning from a comparatively noble and exalted significance to one of lower, if not downright contemptible or obscene, connotation. It has been suggested that there must be something groveling about human nature, since it has so often caused the besmirching of otherwise estimable terms.

However, we must remember that here too the opposite of each tendency is perceptible concomitantly with it, and we must not despair too easily of any of the far-famed tendencies of human nature.

It is particularly words connected with sexual taboo and class snobbishness which tend to degenerate. Many words designating intimate articles of clothing have been shifted so often for this reason that it is difficult to keep abreast of them. So the homely "shirt" falls into disrepute and is replaced by "chemise." Speakers of the English language have often hidden behind an imported French word in order to spare their extremely delicate feelings. "Chemise" in its turn is either replaced by others still more vague, like "combination," or is eliminated entirely, together with the garment itself. The nether habiliments of gentlemen were at one time generally called "breeches"; later a sense of prudery caused this to be replaced by a loan word *pantaloons;* the new word was abbreviated to "pants," which quickly sank in the social scale and was superseded by "trousers." The corresponding diminutive garment of the ladies, formerly "pantalettes" or "panties" has shrunk to "step-ins," "scanties," and (adapting still another word from the masculine attire) "shorts."

In modern times many languages have witnessed a certain pejorative change in titles of class. "Sir," "lady," *monsieur, madame, Herr, Frau, señor, señora,* and the rest have lost their feudal connotations and are currently used for ordinary persons like you and me. "Bourgeois" too is by way of becoming a term of reproach after serving proudly the aspirations of a proud new class. In England, I am told, a wealthy club*woman* speaks of her "char*lady.*" The reverse was formerly true. Malodorous and sinister subjects quickly cast a pejorative pall over their vocabulary. "Slaughterhouse" is avoided for *abattoir;* "undertaker" was originally adopted as a euphemism, but has itself been replaced by "funeral director." An endless source of examples is to be found in the shamefaced phrases by which civilized human beings try to gloss over "natural needs" while alluding to them obliquely. "Toilet," which at one time referred to the entire process of gowning and beautifying oneself for appearance in public, fell into disrepute because of one aspect of that preparation; it is now disappearing before various evasive expressions like "rest-room" (but who "rests" in such a place?), "powder room," "lounge," "lavatory" (a British term), and others due to the jocular originality of individual tavern keepers. Further examples of this sort of thing will be found in a later chapter. The reader may amuse himself by extending the list. Names for underlings, for inhabitants of the country (as opposed to the sophisticated city), for foreigners, for death and certain types of sickness, are particularly prone to degenerate. At certain periods of history when the dominant culture happened to be in the hands of a cynical and dissipated group, many of the most innocent words have suffered degeneration. Allardyce Nicoll reports that the society comedies of the Restoration period in England tended to vilify any and all words applied to woman, even the most sacred and dignified. To us innocents it must appear an incredible situation to find the words "sister" and even "mother" degenerated to pornographic significance as they were in the seventeenth century. In our day such pejorative modifications are more strictly confined to the underworld; they do not appear so baldly in our accepted literature.

Ameliorative change is an elevation in meaning. Here too some of the clearest examples are connected with social levels and class distinctions. A "marshal" once meant a lad who looked after mares—that is, a stable boy; a "bishop" was one who had the job of looking (Greek *skopein*) things over (*epi*)—that is, a humble "overseer." An "angel" was merely a messenger, no more exalted than one of our gray-clad postmen before the theologians took the term and exalted it by using it to designate intermediaries between divine intelligence and man's intelligence. A *cathedra* (from the Greek) was once an ordinary chair; now it is associated only with exalted dignitaries. The bishop's seat was his cathedral town. The papal "see," from Latin *sedes*, has made the original word too sacrosanct for ordinary use.

With the development of a modern mercantile culture, some adjectives not originally laudatory have assumed meliorative connotation. A "shrewd" person was once "wicked, rascally"; now he's admired because he can beat his neighbors in the game of competition. A "smart" man, etymologically, is one to cause pain (think of German *Schmerz*); now we take our hats off to him. "Nimble" (from the verb *niman*) used to mean "good at taking things" as a pickpocket might be, but is now a synonym for general dexterity; "keen" meant "sharp," and both words have become terms of approval in the non-physical sphere; even "slick" contains overtones of admiration (albeit grudging), especially in America.

Narrowing or *restriction* of meaning occurs when a term that once applied to a general class of things is limited to special cases. This process often accompanies borrowing from one language to another. In Russian, *dog* doesn't mean the entire canine breed but only a great Dane; Russian *shtraf* (obviously taken from German) has narrowed from the sense of "punishment in general" to "money fine." Our word "corpse" is in origin identical with Latin *corpus*, meaning any sort of body, human or otherwise, alive or dead. Now it can only mean a cadaver or, as medical students would say, "a stiff." "Garage," a more recent loan word, comes from a French verbal noun originally meaning "place for storing anything," not exclusively automobiles. "Undertaker," already cited, shows narrowing as well as pejorative change. "See" as in "papal see" (quoted above) shows narrowing as well as ameliorative change.

Many words which were once abstract designations for a quality or a class have narrowed in the special direction of *concretization*. Latin *fructus* was once "the act of enjoying oneself"; now we limit "fruit" to the apples, pears, and oranges which help us to that desirable end in one definite form. Our word "city," designating a very tangible, visible, and in spots solid gathering of human beings meant "quality of citizenship" when it was first created as Latin *civitas*. "Faculty," which for academicians evokes a group of learned gentlemen—with a few ladies sprinkled in—robed in scholastic cap and gown, once had only the vaguer sense of "the possibility of doing (*facere*) something." We still use the word in this earlier sense when we speak of a man's "faculty" of concentration, or other talent. The word "faction," too, could have been applied to any sort of "act of doing" (*facere*). Now it is restricted to political groups within a larger body. This specialized and concretized use appears quite early. On the walls of Pompeii there are inscriptions using the verb form of *facere* in a narrow, political sense which has been interpreted as "unite, get together." Thus *Caupones, facite! Pomari, facite! Lignari, facite! Unguentari, facite!* would mean: "Tradesmen, unite! Dealers in apples, wood, and perfumes, get together!" It all sounds very familiar.

Expansion is of course the opposite of restriction. A term for an individual is adopted for a class. This is exemplified, for instance, whenever a proper name or a patented trade name is extended to cover a whole group. Soon after the phonograph was invented, one particular make, the "victrola," was popularly universalized for all. "Lynch" and "dunce," as your dictionary will tell you, come from the names of individual persons now forgotten in the larger idea. A "barn" formerly meant a "barley-place"; now it refers to a place of storage for all kinds of grain and for other things as well. "Box," once designating only receptacles made of *buxum* or boxwood, can now apply to all. "Manuscript" is often extended to cover material more accurately called "typescript." Bréal records a curious instance from the Sanskrit. Here *go-shtha* meant "cow-place" literally, but was universalized for any kind of stable, so that it was later possible to speak of an *açva-go-shtha* or "horse-cow-place." (*Açva,* nominative *açvas,* is cognate with Latin *equus.*)

Within the general field of metaphorical change which we have already briefly discussed, it is possible to distinguish a number of special types. The shift may occur in the direction of *hyperbole,* or deliberate exaggeration, causing expressions of great strength to diminish toward feebleness. Most of our intensive words go this way. "Awfully," "enormously," "tremendously" are adverbs used for quite trivial matters now. The tendency is still more marked with the more transitory expressions of disapproval which never achieve the dignity of accepted usage. "Stinking," "lousy," "vile," "putrid" are a few of those which have been recently current on both sides of the Atlantic. Naturally one's ears become jaded by these excessive stimulants, and they are quickly discounted as hyperbolic exaggerations. On the other hand *litotes,* or understatement, occurs when a weak or colorless word assumes strength from special uses. Some recent examples are: "protective custody" (which sounds reassuring on the face of it); to "co-ordinate" (*gleichschalten*), which under certain circumstances means quite ruthless elimination of opposition; to "strafe," from German *strafen,* a simple word for "to punish," now assuming connotations of bombed cities and civilian terror.

Shift to Opposite Meanings

When words are falling into disuse they sometimes take on new meanings because of association with the few stereotyped phrases in which they survive. "Desultory reading" means "disjointed, skipping" sort of reading. It might in fact be quite feverish in tempo. But since the phrase is now felt to be primarily an opposite of "continuous, orderly, *purposeful* reading," it has assumed connotations of "lazy, relaxed," which were once foreign to it. Apparently it is natural for us to think of qualities in pairs—each one together with its opposite. When I say "bright" I am unconsciously thinking "not dark." As Jost Trier, a German scholar, expresses it concisely in a recent study: "Every word spoken evokes its own opposite meaning." We exclude the opposite while at the same time we are aware of it as a kind of negative definition. But one word may have a whole series of opposites, due to the accidents of association. It is thus that "desultory" comes to mean "lazy"—by negation of an opposite not originally associated with it. So a person who had only encountered "otiose" in the single phrase of disapproval, "otiose epithet," might assume it meant "not decent, not polite," whereas it means only "not accurate; not needed; lazy, superfluous, functionless."

By such elimination "egregious" has become petrified in a few phrases which not only limit but essentially change its earlier sense. It is a vivid compound in its origin, from Latin *ē, ex,* "out of," and *grex, gregis,* "a flock." A sheep that stood out from the rest of the flock was, literally, an "outstanding" sheep, equally so, whether for good or ill. But words in English with the sense of "outstanding, conspicuous" readily assume the sense of "immodest, blatant, ungentlemanly." (A gentleman observes a well-bred conformity with the herd.) In this particular word the pejorative tendency is strengthened by the limitation of its use to a few obsolescent phrases like "an egregious error" and "an egregious ass." Who has ever heard denizens of a conservative club (where the word is most apt to be used) speak of one with "egregious talent" or "egregious virtues"? No; a gentleman's chief virtue is to have nothing in excess. Thus the accidents of association surrounding a word rarely used have modified it so that it is now felt to describe qualities with which it originally had no concern. Another instructive example is the semantic shift in the word "meat." The archaic use, found in the phrases "bread and meat" and "meat and drink," shows that the word once had a more general scope than now. But by new associations, especially new ideas about the foods it was meant to *exclude,* it became the equivalent of "non-vegetable" as well as "non-liquid" nourishment. This in turn caused a displacement of "flesh," which had been commonly used for food in expressions like "flesh meat," but is now used alone for the muscular part of any animal body apart from (*excluding*) connotations of edibility. In Spanish *carne* means both "meat" and "flesh."

SAMUEL T. WILLIAMSON · *How to Write like a Social Scientist*

During my years as an editor, I have seen probably hundreds of job applicants who were either just out of College or in their senior year. All wanted "to write." Many brought letters from their teachers. But I do not recall one letter announcing that its bearer could write what he wished to say with clarity and directness, with economy of words, and with pleasing variety of sentence structure.

Most of these young men and women could not write plain English. Apparently their noses had not been rubbed in the drudgery of putting one simple well-chosen word behind the other. If this was true of teachers' pets, what about the rest? What about those going into business and industry? Or those going into professions? What about those who remain at college—first for a Master of Arts degree, then an instructorship combined with work for a Ph.D., then perhaps an assistant professorship, next a full professorship and finally, as an academic crown of laurel, appointment as head of a department or as dean of a faculty?

Certainly, faculty members of a front-rank university should be better able to express themselves than those they teach. Assume that those in the English department have this ability. Can the same be said of the social scientists—economists, sociologists, and authorities on government? We need today as we never needed so urgently before all the understanding they can give us of problems of earning a living, caring for our fellows, and governing ourselves. Too many of them, I find, can't write as well as their students.

—From *The Saturday Review of Literature,* October 4, 1947. Reprinted by permission of *The Saturday Review* and Samuel T. Williamson.

I am still convalescing from overexposure some time ago to products of the academic mind. One of the foundations engaged me to edit manuscripts of a socio-economic research report designed for the thoughtful citizen as well as for the specialist. My expectations were not high—no deathless prose, merely a sturdy, no-nonsense report of explorers into the wilderness of statistics and half-known fact. I knew from experience that economic necessity compels many a professional writer to be a cream-skimmer and a gatherer of easily obtainable material; for unless his publishers will stand the extra cost, he cannot afford the exhaustive investigation which endowed research makes possible. Although I did not expect fine writing from a trained, professional researcher, I did assume that a careful fact-finder would write carefully.

And so, anticipating no literary treat, I plunged into the forest of words of my first manuscript. My weapons were a sturdy eraser and several batteries of sharpened pencils. My armor was a thesaurus. And if I should become lost, a near-by public library was a landmark, and the Encyclopedia of Social Sciences on its reference shelves was an ever-ready guide.

Instead of big trees, I found underbrush. Cutting through involved, lumbering sentences was bad enough, but the real chore was removal of the burdocks of excess verbiage which clung to the manuscript. Nothing was big or large; in my author's lexicon, it was "substantial." When he meant "much," he wrote "to a substantially high degree." If some event took place in the early 1920's, he put it "in the early part of the decade of the twenties." And instead of "that depends," my author wrote, "any answer to this question must bear in mind certain peculiar characteristics of the industry."

So it went for 30,000 words. The pile of verbal burdocks grew—sometimes twelve words from a twenty-word sentence. The shortened version of 20,000 words was perhaps no more thrilling than the original report; but it was terser and crisper. It took less time to read and it could be understood quicker. That was all I could do. As S. S. McClure once said to me, "An editor can improve a manuscript, but he cannot put in what isn't there."

I did not know the author I was editing; after what I did to his copy it may be just as well that we have not met. Aside from his cat-chasing-its-own-tail verbosity, he was a competent enough workman. Apparently he is well thought of. He has his doctorate, he is a trained researcher and a pupil of an eminent professor. He has held a number of fellowships and he has performed competently several jobs of economic research. But, after this long academic preparation for what was to be a life work, it is a mystery why so little attention was given to acquiring use of simple English.

Later, when I encountered other manuscripts, I found I had been too hard on this promising Ph.D. Tone-deaf as he was to words, his report was a lighthouse of clarity among the chapters turned in by his so-called academic betters. These brethren—and sister'n—who contributed the remainder of the foundation's study were professors and assistant professors in our foremost colleges and universities. The names of one or two are occasionally in newspaper headlines. All of them had, as the professorial term has it, "published."

Anyone who edits copy, regardless of whether it is good or bad, discovers in a manuscript certain pet phrases, little quirks of style and other individual traits of its author. But in the series I edited, all twenty reports read alike. Their words would be found in any English dictionary, grammar was beyond criticism, but long passages in these reports demanded not editing but actual translation. For hours at a time, I floundered in brier patches like this: "In eliminating wage changes due to purely transitory conditions, collective bargaining has eliminated one of the important causes of industrial conflict, for changes under such conditions are almost always followed by a reaction when normal conditions appear."

I am not picking on my little group of social scientists. They are merely members of a caste; they are so used to taking in each other's literary washing that it has become a habit for them to clothe their thoughts in the same smothering verbal garments. Nor are they any worse than most of their colleagues, for example:

> In the long run, developments in transportation, housing, optimum size of plant, etc., might tend to induce an industrial and demographic pattern similar to the one that consciousness of vulnerability would dictate. Such a tendency might be advanced by public persuasion and governmental inducement, and advanced more effectively if the causes of urbanization had been carefully studied.

Such pedantic Choctaw may be all right as a sort of code language or shorthand of social science to circulate among initiates, but its perpetrators have no right to impose it on others. The tragedy is that its users appear to be under the impression that it is good English usage.

Father, forgive them; for they know not what they do! There once was a time when everyday folk spoke one language, and learned men wrote another. It was called the Dark Ages. The world is in such a state that we may return to the Dark Ages if we do not acquire wisdom. If social scientists have answers to our problems yet feel under no obligation to make themselves understood, then we laymen must learn their language. This may take some practice, but practice should become perfect by following six simple rules of the guild of social science writers. Examples which I give are sound and well tested; they come from manuscripts I edited.

Rule 1. Never use a short word when you can think of a long one. Never say "now," but "currently." It is not "soon" but "presently." You did not have "enough" but a "sufficiency." Never do you come to the "end" but to the "termination." This rule is basic.

Rule 2. Never use one word when you can use two or more. Eschew "probably." Write, "it is improbable," and raise this to "it is not improbable." Then you'll be able to parlay "probably" into "available evidence would tend to indicate that it is not unreasonable to suppose."

Rule 3. Put one-syllable thought into polysyllabic terms. Instead of observing that a work force might be bigger and better, write, "In addition to quantitative enlargement, it is not improbable that there is need also for qualitative improvement in the personnel of the service." If you have discovered that musicians out of practice can't hold jobs, report that "the fact of rapid deterioration of musical skill when not in use soon converts the employed into the unemployable." Resist the impulse to say that much men's clothing is machine made. Put it thus: "Nearly all operations in the industry lend themselves to performance by machine, and all grades of men's clothing sold in significant quantity involve a very substantial amount of machine work."

Rule 4. Put the obvious in terms of the unintelligible. When you write that "the product of the activity of janitors is expended in the identical locality in which that activity takes place," your lay reader is in for a time of it. After an hour's puzzlement, he may conclude that janitors' sweepings are thrown on the town dump. See what you can do with this: "Each article sent to the cleaner is handled separately." You become a member of the guild in good standing if you put it like this: "Within the cleaning plant proper the business of the industry involves several well-defined processes, which, from the economic point of view, may be characterized simply by saying that most of them require separate handling of each individual garment or piece of material to be cleaned."

Rule 5. Announce what you are going to say before you say it. This pitcher's wind-up technique before hurling towards—not at—home plate has two varieties. First is the quick wind-up: "In the following section the policies of the administration will be considered." Then you become strong enough for the contortionist wind-up: "Perhaps more important, therefore, than the question of what standards are in a particular case, there are the questions of the extent of observance of these standards and the methods of their enforcement." Also you can play with reversing Rule 5 and *say what you have said after you have said it.*

Rule 6. Defend your style as "scientific." Look down on—not up to—clear simple English. Sneer at it as "popular." Scorn it as "journalistic." Explain your failure to put more mental sweat into your writing on the ground that "the social scientists who want to be scientific believe that we can have scientific description of human behavior and trustworthy predictions in the scientific sense only as we build adequate taxonomic systems for observable phenomena and symbolic systems for the manipulation of ideal and abstract entities."

For this explanation I am indebted to Lyman Bryson in the *Saturday Review of Literature* article (Oct. 13. 1945) "Writers: Enemies of Social Science." Standing on ground considerably of his own choosing, Mr. Bryson argued against judging social science writing by literary standards.

Social scientists are not criticized because they are not literary artists. The trouble with social science does not lie in its special vocabulary. Those words are doubtless chosen with great care. The trouble is that too few social scientists take enough care with words outside their special vocabularies.

It is not much to expect that teachers should be more competent in the art of explanation than those they teach. Teachers of social sciences diligently try to acquire knowledge; too few exert themselves enough to impart it intelligently.

Too long has this been excused as "the academic mind." It should be called by what it is: intellectual laziness and grubby-mindedness.

S. STEPHENSON SMITH · *The Case for Long, Hard Words*

There is a case for long, hard words. You will not often hear it argued. The contrary doctrine is more fashionable: Keep to short, simple, Saxon. Ever since Herbert Spencer set this half-truth going, it has snowballed in the way that half-truths usually do. It is sound advice as far as it goes. You cannot help using a PREPONDERANCE[1] of Saxon, since the small change of the language and most of its connective tissue come from that source. But there are at least four COGENT reasons why some of the long, difficult words are needed, though they should be used sparingly.

First, one such word can sometimes do the work of ten. It just looks long. The rate of increase of speed of a moving or falling object is ACCELERATION. The capacity to adjust to changes in environment by altering responses or habits is ADAPTABILITY. Mixing in a cheaper and less EFFICACIOUS substance in some food or chemical is ADULTERATION. An index or small number written above and to the right of an ALGEBRAIC symbol or quantity to show how many times the symbol or quantity is to be used as a factor is an EXPONENT. Think what a nuisance it would be always to go around Robin Hood's barn by using the long phrase when we wanted to express the meaning in such words as these. The long word is really verbal shorthand.

— From *How to Double Your Vocabulary*, by S. Stephenson Smith, Published, 1947, by Thomas Y. Crowell Company and reprinted by their permission.

[1] Capitals and italics are used in this selection as a device to call attention to words by which the reader may enlarge his vocabulary.

Such words may also be needed as SYNONYMS, for variety as well as for COMPACTNESS. If two DISPUTANTS are so far apart that they can't patch up their quarrel, it helps a reporter if he can say—at the second mention of the fact—that they're IRRECONCILABLE or UNCOMPROMISING. If "graft" is involved, it is handy to know about "squeeze" and "pickings," but sometimes the polite term is also useful: PERQUISITES. If you have to call somebody *stingy* three times, PARSIMONIOUS and *tight-fisted* suggest themselves.

Again, the long or unusual word may be needed to express an exact shade of meaning. There is only one possible word for a time scheme covering a series of events or a succession of DYNASTIES: CHRONOLOGY. And the curve traversed by a PROJECTILE is its TRAJECTORY. The case is still stronger if descriptive words are involved. Shaw somewhere talks of "*breath-bereaving* insolence." Just try expressing that any other way.

John Hersey, in his memorable *New Yorker* story on Hiroshima, has occasion to indicate the mounting hostility toward all foreigners as the war drew nearer to Japan. He uses the one right word to convey this with full force: ". . . Father Kleinsorge, of the Society of Jesus . . . felt the strain of living in an increasingly XENOPHOBIC Japan . . ." The word means "stranger-fearing" in Greek, and the association we have with PHOBIA makes it all the more expressive. It suggests a touch of maddened suspicion.

When the Russians, after a war in which they were BELLIGERENTS for only one week, rammed ahead and *without consulting their allies* yanked half a billion worth of machinery out of Manchuria, we could not call this a *one-sided* move without making the misunderstanding worse. For *one-sided* might mean merely that it benefited them, not China or the other allies—which is true, but not what is meant. The word needed is UNILATERAL, the exact way to describe an action taken by one side without consulting the other. Frank Sullivan can make all the fun he likes of the word, as he does when he has his mouthpiece Aunt Sarah say:

"I REDEPLOYED myself. . . . Came down on the train unilaterally."

"Unilaterally?"

"On one side of the Hudson. I like those fancy new DIPLOMATIC words that nobody quite knows what they mean. Give a statesman enough words like unilateral and he can wiggle out of any fix."

Mr. Dooley would have ticked Sullivan off on that one. The fact is that diplomatic negotiators need words like *unilateral*—if they are to button up agreements more tightly. It might also help if the negotiators dealing with the Kremlin studied a little MARXIAN DIALECTIC—even if only in the way the atheist studies Scripture: to confound it. Otherwise East-West diplomacy is likely to continue in a semantic fog.

It is this need for precise terms that can be taken in only one sense that accounts for extensive borrowing directly from Greek and Latin, when new words are required for scientific or technical gadgets, substances, or processes. And this type of term needed to convey a specific technical sense cannot well be replaced by any simple Saxonism. That is a fourth reason justifying long, hard words.

And the older words from classical sources, long used in discussing politics, ECONOMICS, literature, religion, philosophy and other fundamental subjects, have often been in the language unchanged (except as to spelling) since the sixteenth century—and every LITERATE person needs to know them.

A. L. KROEBER · *The Racial Origin of the American Indians*

The American race can hardly have come from anywhere else than Asia: it entered the New World perhaps ten thousand years ago. Its . . . affiliations are generically Mongoloid. This statement does not mean that the American Indians are descended from the Chinese or Japanese, any more than the fact that these are denominated Mongolians implies their descent from the particular modern people known as the Mongols. We call ourselves Caucasians without any intimation that our ancestors lived in the Caucasus mountains or that the present inhabitants of the Caucasus

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— From *Anthropology* by A. L. Kroeber, copyright, 1923, by Harcourt, Brace and Company, Inc.

are a purer or more representative stock than we. So the Mongolians are that group of "yellow" peoples of eastern Asia of whom the Mongols form part; and the Mongoloids are the larger group that takes in Mongolians, East Indians, and Americans. From the original proto-Mongoloid stem, all three divisions and their subdivisions have sprung and differentiated. The American Indians have probably remained closer to it than the Chinese. It would be more correct to say that the Chinese have developed out of the ancient Indian-like stock, acquiring slant eyes rather late.

2 The proto-Mongoloid stem must be ten thousand years old. It is probably much older. In the Aurignacian period, the third from the last in the Old Stone Age, twenty-five thousand or so years ago, possibly longer, the two other great types of living men were already rather well characterized. The fossil Grimaldi race of this period shows pretty clear Negroid affinities; the contemporary Cro-Magnon race can probably be reckoned as proto-Caucasian. It is therefore probable, although as yet unproved by discoveries, that the proto-Mongoloids were also already in existence.

The Time of the Peopling of America

3 About the end of the Palæolithic or beginning of the Neolithic some of these proto-Mongoloids drifted from Asia into North America. These were probably the real discoverers of the New World, which they found inhabited only by brutes. The time of their invasion can be but roughly fixed, yet within its limits it seems fairly reliable. Had the migration occurred much later, when the Neolithic was well under way, the domesticated animals and plants of the Old World would have been introduced—cattle, pigs, sheep, wheat, barley, rice, millet, all of which the Americans lacked. The same holds for inventions like the wheel.

4 Analogous arguments weigh against a belief in a possible earlier peopling of America, say in the middle of the Palæolithic. In that event there ought to be cave or rock shelter or river terrace deposits corresponding to those of Europe in containing only implements of Palæolithic type. But none such have been found in America, or where alleged, their circumstances have remained matters of controversy.

5 Further, if Palæolithic man had inhabited the western hemisphere, it is likely that his fossil remains would have come to light. There has been much excavation, and numerous investigators are alive to the importance which evidence of this sort would bear. Yet not a single human fossil of positively Pleistocene age or type has been discovered. Numerous sensational finds have been announced. But in every case their geological matrix or stratum has been proved either recent or open to doubt. And not a single fragment of a skeleton of Neanderthal type, or one equally different from modern man, is on record from America. Every once alleged Pleistocene skull or part appears to belong to some branch of the American Indian race as it exists to-day. It is therefore unlikely that man reached America before the last stage of the Palæolithic.

6 If the date of the entry is set at ten thousand years ago, the elapsed period accounts very well for the present diversification of the American race. There are broad and narrow headed tribes, tall and short ones, some with hooked noses, others with slightly wavy hair. But the fundamental type is everywhere the same. The differences seem just such as environment and mode of life, the accidents of descent from small groups, and perhaps a slight effect of selection, would be certain to accomplish in time. In general, the natives of America are remarkably homogeneous, considering the vast territory they occupy, its variations of temperature, humidity, altitude, and food supply, and the marked differences in the living customs of many tribes.

7 The one group that at all stand apart are the Eskimo; and these are distinct in language and culture also. Moreover, they occupy the parts nearest to Asia, including both sides of the Behring Strait. Thus they seem to represent a separate origin. But all the other groups from Alaska to Patagonia are so closely related somatically, that no comprehensive and generally accepted subclassification of them has yet been possible. In fact, the American race seems almost too undifferentiated to require ten thousand years for its superficial diversifications; until it is remembered that human races left to themselves seem in most cases to alter rather slowly. Mixture is one of the greatest factors of racial change, and in the isolation of America this element was eliminated to a much larger extent than in most of the Old World.

Linguistic Diversification

8 Language tells a similar story. The American Indian languages certainly appear to be diverse. It has been customary to reckon about a hundred and fifty distinct speech families in North and South America. But many of these are imperfectly known; of late several Americanist philologists have been inclined to see definite resemblances between numerous tongues that are superficially different. Buried and disguised resemblances are being noted, which point to original unity. Thus the number of genetically distinct families or language stocks is shrinking. The number to be ultimately recognized bids fair to be small.

9 Old World conditions are at bottom more similar than at first glance seems. English and the modern Hindu languages, such as Bengali, although certainly related, are quite different from each other. The proof of their common Indo-European origin rests largely on the similarities between their ancestral forms, Anglo-Saxon and Sanskrit. These in turn are tied together more closely by the connecting evidence of other ancient languages, such as Greek and Latin. Take away these extinct tongues and the modern transitional ones, imagine English and Bengali to be the only representatives of Indo-European, and it is doubtful whether their common parentage could be wholly proved. The relationship would certainly not be readily recognizable; the most painstaking analysis would reveal so many words wholly peculiar to each language, and so many exceptions to every suggestion of regular sound equivalences, that conservative philologists would perhaps refuse to commit themselves on the problem of a single origin.

10 This imaginary situation parallels the actual one in American linguistics. Not a single ancient form of speech has been preserved. Many living ones are inadequately known. The fact that some enthusiast has compiled a grammar of Nahuatl or Quechua or Eskimo does not necessarily mean that he has dissected out its whole structure. A book devoted to a language may be as superficial as it looks learned. And the man who really knew Nahuatl has usually concerned himself very little with Quechua. So far as he might become acquainted with it, it would appear so different that the pressing of comparisons would seem sterile. Thus the great diversity of

American languages came to be accepted not because any one believed it to have been really established, but because until recently no critical scholar considered himself able to establish serious connections. It has been a case of unproved rather than disproved unity of origin.

11 If the Indo-European languages were not our own but those of a strange race and therefore known to us much less intensively; if the history of their ancient forms were obliterated instead of preserved for us for over three thousand years; and if they were allowed a period of ten thousand years in which to have differentiated, philology would probably be assigning them to several distinct stocks. Multiply by three the amount of difference which Bengali shows from Sanskrit, and by six that of English from Anglo-Saxon, and a degree of divergence might be attained roughly comparable to that between Nahuatl and Quechua, or Maya and Iroquois. This is not an assertion that Nahuatl and Quechua are related. It is a claim that in the light of present knowledge they might have been one language ten thousand years ago. A single people with a single speech could well have given rise in so long a period as that—three hundred generations—to languages that now seem so different.

12 And at that, there is no reason for believing that all American languages are necessarily derivable from a single mother tongue. There might have been half-a-dozen or a dozen idioms in use among as many populations which moved out of Asia into Alaska. For of course it is improbable that the migration was an isolated, unitary event. More likely it filled a period of some length, during which a succession of waves of population lapped from one continent into the other. Each of these waves, which only the perspective of ages has merged into the appearance of a single movement, may have brought its own speech, from which in time there branched out languages that ultimately became so differentiated as to appear now like distinct families. Not that it is known that this happened; but it seems inherently plausible that it might have happened, and there is no present evidence to the contrary.

13 In short, philology interposes no obstacle to the acceptance of the date which has been assumed as roughly defining the period of the peopling of America.

The Primitive Culture of the Immigrants

14 As to the culture the immigrants brought with them, direct testimony being lacking, it is necessary to fall back on the working hypothesis that this culture was about the equivalent of the most backward American culture of to-day; or, better, of the common denominator of all American cultures, including the lowest. This procedure yields the group of elements entered in the bottommost layer of Figure 35.[1] These elements were either brought along on the invasions or developed so soon afterwards as to become equally widely diffused. The harpoon, for instance, was used in Europe in the Magdalenian—at the close of the Palæolithic. For the bow and arrow, there is no proof in Europe until the opening of the Neolithic. The dog, the earliest animal attached to man, is known from the same period, whereas cattle, swine, and sheep were kept only at the height of the Neolithic. As the American Indians possess dogs, it is difficult to attribute the custom otherwise than to a heritage from the same culture stage in the Old World to which the harpoon and bow belong. This connection is made more certain by the fact that the Indian dog is most closely related not to the specifically American coyote but to the circumpolar wolf and perhaps the jackal, and diverged into much the same types of breeds as the Old World dog. There are American races of dogs—some of them ancient, as represented by skeletons from mounds, and mummies from Arizona and Peru—that are respectively droop eared, curly tailed, short legged, long furred, hairless, or undershot in the jaw, thus corresponding closely to the breeds evolved with similar traits in the eastern hemisphere, and virtually forcing the conclusion that the dog was brought into America by man and not domesticated from a wild species in this continent.

15 Such evidence as this it is that yields the period indicated—the closing stages of the Palæolithic or the earliest Neolithic—as the time of man's entry into America. The ten thousand years set as the lapse since this event are admittedly more arbitrary. No one pretends to date the remoter stages of European pre-history exactly. Relative durations are all that it is legitimate to pin much faith on. Dates are avowedly approximations. The estimate here

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[1] These elements are: dog, bow, harpoon, fire drill, basketry, family groups, men's house, shamanism, crisis ceremonies. [Editor's note.]

chosen for the end of the Palæolithic is 8000 B.C.—ten thousand years ago. This round number, not taken too literally, has the virtue of concreteness and seems somewhere near the truth. It may yet prove to be a few thousand years short or over. But it does allow enough time, and no obtrusive excess of time, for the diversification of the Indians in race, speech, and culture; and this seeming accord of the assumption with the present facts may be taken as a rough corroboration.

16 The other culture elements assigned in Figure 35[1] to the first or immigrant stratum cannot be dated by any concrete remains, since some are institutions and others are arts whose materials are perishable—baskets and fire drills, for instance. They are, however, found among all or most of the lower American tribes, and recur more or less widely in the eastern hemisphere.

17 The first settlers may accordingly be pictured as a people living off nature; hunting, fishing, gathering roots and fruits and seeds, digging or picking shellfish. Their best weapons were the bow and the harpoon with detachable head. The latter may already have been propelled by the atlatl or spear-thrower, an artificial extension of the arm. Simpler weapons were also used: clubs, stones, probably darts and spears, perhaps daggers of bone or stone. Flint was chipped and flaked, other stones were beginning to be ground or rubbed into form. Bone awls served for piercing; less certainly, eyed needles for sewing. Cordage of bast was twisted, and in all likelihood baskets, bins, weirs, traps were woven or twined, perhaps also nets made. Dogs were alternately played with and kicked about; they were half kept, half tolerated, probably eaten in time of need. There was no organization of society but on a basis of blood and contiguity. Related groups would act together until they fell apart. Labor was sex allotted; the men of each community possibly maintained a house or place of meeting at which they gathered in their leisure, perhaps nightly, and which women feared to enter. Beliefs in souls and spirits were already immemorially old. The people had risen to the point of being no longer passive toward the immaterial; the most intense-minded among them aspired to communication with the spirits; they demonstrated to their fellows their control and utilization of the supernatural beings, and were what

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[1] See footnote, p. 160.

we call shamans. Custom in fact conceded the influence of the spiritual world on every human being, and felt it to be strongest at times of passage or crisis—birth, maturity, death. Puberty in particular seemed important, as portentous of the whole of adult life. The welfare of the individual and his proper relation to the community were therefore sought to be insured by spiritual safeguarding. Girls were secluded, treated or doctored, trained; boys subjected to whipping or other ordeals of fortitude; the passing of such initiation admitted them to the men's house.

Discussion

1. What argument is presented to show that the American Indians were not descended from the Chinese? What kind of proof is there that Chinese and Americans had a common ancestor?
2. Summarize the arguments for dating the entry of human beings into the New World.
3. Explain why the author devotes so much attention to language. To what degree is the section on language an argument? What methods of argument are used? Does the author give his conclusion as a *fact* or as a *theory*?
4. What was the level of culture of the first immigrants? What tools did they use, what was their social structure, etc.?
5. Explain the use of the following words and phrases which appear first in the paragraphs indicated.
   Mongoloid, proto-Mongoloid (1); *Palæolithic, Neolithic* (3); *fossil* (5); *homogeneous* (6); *superficially, genetically* (8); *Indo-European* (9); *atlatl, contiguity, shamans, ordeals of fortitude* (17).
6. Why is the manner of writing—the style—suitable to a textbook? What specific aids to reading, common in textbooks, are used?

Writing

Write a summary about one-sixth the length of this selection which would enable you, a month hence, to pass an examination on Kroeber's pages with a good grade.

LOUIS M. HACKER · *The Colonial under Mercantilism*

The Political Sphere

The American of the seventeenth and eighteenth centuries was a colonial. He lived under English law, read English books, wore English clothes, and sometimes he sent his sons to English schools. Nevertheless he was a colonial in a variety of ways, some apparent and obvious, some subtle. He had no representation in the English Parliament and, in the final analysis, his political affairs were ruled over by people who did not know his peculiar problems. He had to submit to a judiciary, as a last court of appeal, which sat three thousand miles away. He functioned in an economic system which regarded his interests and activities as subordinate to those of his mother country. He was received well when he went to England; his spokesmen were listened to courteously; but, always, he and they were led to understand that the function of the settlements overseas was to strengthen the position of the mother country in a world where the search for wealth was always the first consideration. In short, he was a colonial with a specific function to perform in a climate guided by the rules of mercantilism.

The Economic Sphere

Nowhere were these rules clearer than in the domain of business enterprise. In some areas the colonial was permitted to operate in a protected market. In others—as we shall also see—he was forced to operate in a monopoly one. At all times, he was a colonial businessman rather than a free enterpriser; and in time, as a result of his inferior position and the restraints imposed upon him, he was bound to become restive. The American Revolution made him free economically and politically; the colonial sought freedom for both reasons.

The colonial of the one hundred years before the American Revolution—particularly the colonial businessman—lived in a world

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— Reprinted from Louis M. Hacker, *The Shaping of the American Tradition*. Copyright 1947 by Columbia University Press.

that is hard for us to understand today. First, English capital played a very minor role in the establishment of business concerns; capital for new enterprises and for expansion came largely from the savings of business launched by the colonials themselves. Second, colonial business never had the benefits of corporate organization and management. Third, it did not have the assistance of any kind of banking mechanism. There were no agencies for deposit and discount; none for the creation of funds for working capital; none for the collection of savings and their conversion into investments.

This important fact should also be borne in mind: the typical colonial businessman was a merchant rather than an industrialist. He diversified his affairs, to spread his risks, because he had limited capital resources at his command; so that, at one and the same time, he could be engaging in retail and wholesale trade, ironmaking, the buying and selling of furs, land speculation, and money lending. He bought and sold for himself. He acted as a commission man for other businessmen. He outfitted ships and sent their captains out on trading voyages. He put up goods at auction, or public vendue. He joined with others—through the device of the partnership—in building and owning ships and in insuring cargoes.

Most important of all, perhaps, was the fact that as a businessman he was limited in the nature of the adventures upon which he might embark. As a wholesale merchant, he could not trade freely all over the globe. As a manufacturer, he could not fabricate anything his fancy dictated. At these points, notably, he was made to understand that he was a colonial. The over-all mercantilist program imposed upon the colonies by England, the mother country, impressed these facts upon him:

First, it was the function of the colonies to provide the basic raw materials needed by English industry and trade to make England strong and rich.

Second, it was the role of the colonies to buy the surpluses of English manufactured ware.

Third, it was the duty of colonials to tie their currencies to the English pound sterling—to be, in our modern terminology, members of the sterling bloc.

The Navigation System

To achieve these ends, England put the colonies under the supervision of the so-called Navigation System. The first Act of

Trade and Navigation was passed by Parliament in 1651; but it was the Act of 1660 that really set up the cornerstone of the system. According to the 1660 law, only English vessels could engage in trade with the English oversea dominions or import any colonial products into England. Again, all commodities grown or fabricated in Asia, Africa, or America could be imported into England or the oversea dominions only in ships owned and manned by English men (or colonials). Also, only certain specified commodities produced in Europe could be imported into England; and these commodities could move only in English ships or in ships of the countries of origin. And, by the Act of 1663, all the commodities grown, produced, or fabricated in Europe which the colonies might require or wished to handle had to come by way of England as the entrepôt. Transshipment in this fashion meant, of course, export duties and additional freight and handling charges, so that the cost of European goods for the colonists was increased. This meant, again, an effort to force the American colonies to deal with England alone for their manufactured-ware necessaries. Later acts were designed to strengthen the administrative regulations of enforcement.

This was only one part of the Navigation System. The second had to do with production. Written into the Acts of Trade and Navigation were so-called "enumerated lists," or lists of raw-material products grown or created in the colonies which were to be exported to England alone. Naturally, these products were for English use or English transshipment into the European markets. In this way England (in true mercantilist fashion), hoped to free herself of her dependence upon the naval stores, minerals, spices, and the like, of foreign lands; also, the carriage of such wares in the European trade meant earnings for English ships and profits for English merchants and processors. There was, in addition, the factor of revenues from import and export duties levied on such articles. So, the Acts of 1660 and 1663 placed the following colonial commodities on these "enumerated lists": Sugar, cotton, tobacco, ginger, indigo, and various dyewoods. The Acts of 1704 and 1705 included rice, molasses, naval stores, hemp, and masts and yards. The Act of 1721 listed copper ore, beaver furs, and other furs. The Act of 1764 enumerated whale fins, hides, iron, lumber, raw silk, and potash and pearl ashes. It will be observed that virtually all the surplus products of the new country, except cereals, meat stuffs, and fish, in time fell under the controls of the Navigation System.

Restrictions on Manufacturing

As far as international trade was concerned, the orbit of colonial enterprise was a limited one indeed. The same restricted opportunities existed in industrial production. The explanation for the insignificance of colonial manufacturing is a simple one; and, again, it is linked with mercantilist restraint. The English administrative apparatus of control over the economic life of the colonies was elaborate. The key agency was the Board of Trade established as such in 1696, although its predecessors ran back into the Cromwellian period. The devices used by the Board of Trade for directing and supervising economic matters included the following: It was given the task of preparation of the civil list, so that it had its hands on the personnel sent over to or in charge of the colonies. It supervised the activities of the colonial judiciary. It passed on the petitions of English companies seeking investment opportunities in the colonies and reported back to the Privy Council. (In this particular it is important to note that very few such requests for charters were granted; and in no cases were the petitions acceded to when a business right of Englishmen was threatened.)

Even more important were the Board's two functions of reviewing colonial legislation and recommending approval or disapproval ("disallowance" was the term employed) to the Privy Council, and of preparing instructions for the deportment of the royal governors. These two rights the Board of Trade employed; so that a good deal of the conflict that emerged between colonial legislatures and royal governors in the eighteenth century stemmed from the constant limitations imposed upon the popular will from overseas. Notably at two points, colonial enterprise was being circumscribed. The first had to do with prohibitions against the encouragement of manufacturing by the colonial legislatures. The second was concerned with the checking of attempts on the part of the colonies to increase their money supply in an effort to escape from the trap of inadequate credit facilities.

It is not generally recognized to what degree colonial legislatures were preoccupied with the problem of manufactures. Taking a leaf from the experiences of the mother country and using characteristically mercantilist devices, the legislatures sought to encourage the development of textile and ironware industries. They passed statutes offering bounties, public credit, and tax exemptions; they tried to create monopolies, to assure fair ware, and to incorporate new towns where industries might be established. The Board of Trade examined these statutes and used a number of means to hold the tendency in check. It recommended disallowance to the Privy Council. It instructed the royal governors to veto. It advised Parliament in the preparation of general legislation.

In the last connection, three laws were passed. The Woolen Act of 1699 struck at the colonial (as well as the Irish) woolen textile industry. Under it, colonial wool, woolen yarn, and woolen cloth could not enter into intercolonial or international trade. The Hat Act of 1732 not only prevented colonial-made hats from moving into intercolonial and international trade but it also reduced the industry to retail and custom-made proportions. Negroes were barred from participation in it; the seven-year apprenticeship law was imposed; and all hatmakers were limited to two apprentices. The Iron Act of 1750 denied to the colonial enterprisers the right to expand their iron operations by the erection of new mills, forges, and furnaces. They could, in other words, continue to produce heavy bar iron; but not wrought ironware or finished steel products.

In addition, the right of disallowance was regularly used by the Privy Council at the recommendation of the Board of Trade. Colonial laws to encourage shoemaking (Pennsylvania, 1705), sailcloth manufacture (New York, 1706), the establishment of new towns (1706, 1707, 1708 in Virginia and Maryland), linen fabrication (Massachusetts, 1756) were vetoed. And it made no effort to conceal its intention. Thus, in 1756, the Board declared that "the passing of laws in the plantations for encouraging manufactures, which any ways interfere with the manufacture of this kingdom, has always been thought improper, and has ever been discouraged."

The Bounty System

Side by side with mercantilist restraint went encouragement, but all to achieve the grand design of making colonial enterprise an adjunct of English economic requirement. Again and again, special privileges were offered by the mother country in an effort to direct colonial activity into specific spheres. England was dependent upon the so-called East Country (lands around the Baltic Sea) for her naval stores, ropes, and rigging. In 1705, to stimulate the colonial production of these staples, upon which shipbuilding was based, bounties were offered for the raising and making of hemp, tar, pitch, and resin. But New Englanders, whom London had particularly in mind, did not yield to these blandishments. In South Carolina an impetus was given to naval store production; in North Carolina, to hemp. The bounties were permitted to lapse for a time, were renewed again in 1729 at a lower level, and then raised once more in 1764. This assisted-production neither solved England's problem—for her own shipbuilding industry continued to depend upon East Country exports—nor did it divert New England enterprise out of those activities that were competitive with the mother country's.

Similar programs were launched in connection with the production of subtropical requirements. Attempts were made to foster the development of wine (imported from France) and silk (imported from Italy) first in Virginia in the seventeenth century and again in Georgia in the eighteenth century. Bounties, assisted emigration, and high prices for wine and wound silk produced no results.

In the case of tobacco, mercantilist policy was more successful. To give the planting colonies an opportunity to cultivate the weed without competition, its growth was banned in Great Britain and Ireland in 1620. On the other hand, tobacco was put on the enumerated list under the Navigation System, so that the crop was moved through the hands of English and Scottish dealers and processors before it was transshipped to the European continent. This was less than a blessing. The fact is, on balance, the mercantilist restrictions and prohibitions hampered colonial enterprise. A closer examination of foreign trade will demonstrate this.

Discussion

1. What was *mercantilism?* What was the political effect of mercantilism on the life of the colonial Americans?
2. What aspects of mercantilism served to hamper the colonial businessman? What kind of business did he engage in? Contrast the situation of today's businessman.
3. What chief economic tenets of mercantilism are presented?
4. How does Hacker emphasize the major aspects of mercantilism?

5. Explain the various workings of the Navigation System. Was it the result of a single piece of legislation, or did it evolve and change?
6. What effect, in detail, did the Navigation System have on manufacturing?
7. What encouragements to colonial businessmen came from the Navigation System?
8. Make a list of the key words in the selection and be prepared to explain them.
9. Make a list of words you had to look up in a dictionary.

Writing

Write a 200–300 word answer to question 1, as if it were asked on an examination.

CHARLES A. BEARD · *The Sources of Law*

The Common Law

1 The first great source of American jurisprudence is the English common law.[1] Its characteristic feature consists in the fact that its rules are not to be found in a code enacted by the legislature, as is generally the case on the continent of Europe, but in decisions of the courts spread over several centuries. The law is thus built up and developed by judicial rulings. To discover the principle that governs in any particular question, an attorney practicing in a jurisdiction where the common law prevails must find out what has been previously determined by the courts and be guided by their decisions.

2 ***Origins.*** The common law began its development in medieval England. When a case came before the royal justices in the Middle Ages they tried to ascertain the prevailing custom bearing on the subject and decide the question in accordance with it. Theo-

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— From Charles A. Beard, *American Government and Politics.* Copyright 1939 (eighth edition) by The Macmillan Company and used by their permission.

[1] Louisiana, whose law is derived from the continental system, is an exception. There are some southwestern states which are not regarded as common law states. [Author's note.]

retically they did not make the law, but merely formulated the practices of the community into legal rules and gave them an official sanction. As a matter of fact they did make the law, for they interpreted the customs and had the power to select some and discard others, especially if there was a conflict. When another case involving the same point was brought before the judges, they generally followed the rule laid down in the decision of the first case. If however it was thought that the original finding was incorrect or that conditions had changed, they would override the previous decision and work out a new doctrine. Thus flexibility was always possible—one of the best features of the common law. In this way a body of precedents was built up and a set of legal doctrines developed. When an entirely novel case came up, some "general principle" of the common law was evoked in its determination.

3 ***Equity.*** As the common law developed, it gradually became more and more crystallized and less pliant. The judges tended to be technical, and any litigant whose case did not fall within certain well-defined classes was liable to be denied the relief really due him. In numerous instances in which obvious injustice was done there was no remedy at law.

4 These deficiencies of the common law were countered by the development of a new body of jurisprudence along with it—a system known as *equity*. It was customary for a person who felt that he had been wronged and could obtain no remedy at law to petition the king or the king's chancellor, for special consideration. The granting of this favor was at first considered an executive act and purely a matter of grace, but gradually the chancery evolved into a regular court with its own body of equity principles, which were much more elastic and far less technical than the ordinary law. Equity therefore gave relief when none could be had at law; and in many instances where the legal remedy was inadequate it accorded the satisfaction that was really demanded by the plain justice of the situation.

5 For example, the only redress granted at law for wrongs done to persons or property is money damages, but equity goes much farther and will command a person to do something which is for the benefit of the plaintiff. Thus, in some kinds of contracts, a court of equity will compel the party in default actually to perform his part of the agreement on pain of imprisonment. Again, equity will

command a person, by an order called an "injunction," to refrain from doing something which is injurious and unjust to the plaintiff.

6 ***English Law Carried to America.*** The English systems of law and equity just sketched were brought to America. When the colonies cast off allegiance to Great Britain, some of the state constitutions provided that the common law should continue in force; but without such a provision, it was binding in American courts and is applied today in so far as it has not been modified by legislation. Very few commonwealths however have retained the system of separate chancery courts.[2] Generally the same court administers both law and equity, and the term "common law" has come to include both law in its technical sense and equity.

7 ***State Variations.*** Although the common law as administered in the various states constitutes a single system of jurisprudence, it has undergone modification in the different jurisdictions. Thus, for instance, on many points the "common law" of Massachusetts and New York will be found to differ. In each state the interpretation which is binding is made by its court of last resort; and as different courts will hold varying views on what is or ought to be the law on a particular topic, the rules applied in different commonwealths will vary. But the courts of each state by no means disregard the decisions of sister states. While the latter are not considered as authoritative as the precedents of the state in which the case is tried, they are treated as advisory statements of the law and have great moral weight, particularly in matters which have not been passed on in that jurisdiction.

Legislative Law

8 The second important source of law is the statutes enacted by the state legislatures.[3] Though the number of acts passed by the forty-eight legislative bodies is enormous, the majority of them, probably nine-tenths, are administrative in character. They relate to the structure and functions of the government—elections, powers of officers, etc.—and do not greatly affect the private law enforced

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[2] New Jersey, Tennessee, Alabama, Delaware, and Mississippi. [Author's note.]

[3] In the broadest sense, state and federal constitutions, executive orders, etc., are to be included among the sources of the law. [Author's note.]

by judicial tribunals. There are a few branches of private law however which it is customary to cover by statute.

9 ***Types of Codification.*** During the past fifty years several fields of the common law have been occupied by statutes, grouped in "codes."

10 (1) One of these is criminal law. In many states there is a penal code or penal law defining the various crimes and providing punishment for each of them. It is generally declared in such cases that only acts prescribed as crimes in the codes shall be penalized, and the common law of crimes is abolished, except in so far as it is used as a guide for the interpretation of the statute.

11 (2) Criminal procedure is another subject that is commonly covered by statutory enactment. Special codes or laws regulating in detail such procedure now exist in a large number of the states.

12 (3) A third very important field now frequently occupied by statute is civil procedure. Through legislation of this character the technical and cumbersome system of common law pleading has been simplified and modified. New York was the pioneer in this reform and many other states have since followed the example.

13 (4) Another type of encroachment on the common law is to be found in the codification of the rules on particular topics and their enactment in statutory form. Thus in New York—one of the states which has gone far in this direction—we find a real property law, general business law, lien law, etc. The tendency toward codification has been expedited by the National Conference on Uniform State Laws consisting of commissioners appointed by the governors of various states. It has made model codes on many subjects, particularly those relative to commerce, and has recommended its proposals to the state legislatures for adoption. For example, the commissioners drafted the negotiable instruments law which has been enacted by all the states. They have also prepared a sales of goods act, a warehouse receipts act, a bill of lading act, etc., which have been adopted by one or more of the commonwealths.

14 (5) Finally, some states have attempted to codify *the entire domain of law*. Louisiana adopted a code soon after its annexation by the United States. California, North Dakota, South Dakota, and some other states, in the West or South, have enacted

codes which purport to include all the principal rules of the common law. In those commonwealths the code, instead of previous decisions, must be examined in order to find the law that governs a particular case. But even there vestiges of the common law remain, for no legislature, no matter how wise, can foresee every possible set of circumstances that may arise and provide in advance for every question of law that may come up.

15 ***Objections to Complete Codification.*** Most lawyers consider the codification of the whole common law undesirable. In the first place, they contend that a civil code fails to accomplish the only purpose for which it is enacted; namely, that of making the law more definite and certain. It is conceded that no code can provide for all contingencies and therefore its rules must be made sufficiently general and elastic to allow their application to novel cases. Quite as much litigation is likely to arise over the interpretation of its terms as over the application of common law rules to particular subjects.

16 In addition, opponents of systematization urge that a civil code involves a number of disadvantages. It increases the diversity of law among the various states. While the development of private law is in the hands of the courts, the tribunals of one state are guided to some extent by the precedents of other commonwealths, and at times they modify their views in accordance with the general weight of authority, thus working toward a desirable uniformity throughout the United States. But the moment the law is codified, the diversities among the states are crystallized and they may increase under subsequent legislative amendments.

17 The greatest objection however brought against codification is its tendency to make the law rigid. Where the common law is in force, the courts, by distinguishing new cases and at times by overruling former precedents, may easily adapt its rules to new conditions and keep it more or less up to the needs of the community. But as soon as the law is codified, this power is taken away from the courts; henceforward the terms of the law can only be modified by legislative action, which leads to constant tinkering and uncertainty.

Discussion

1. What sources of American law are explained?
2. How does English and American law differ from that of continental Europe?
3. How did common law develop? Upon what is it based?
4. Define *equity*—as Beard and the legal profession use the word.
5. What expansion has the term *common law* undergone? How are American courts organized to handle common law and equity cases?
6. What is *legislative law*? What are *codes*? What codes are common and what are their merits?
7. What are the objections to complete codification?
8. What aids to quick and accurate reading are employed by the author?
9. Define the following as they are used in the selection; locate the words by the paragraph numbers and study them in their contexts.

   jurisprudence, jurisdiction (1); *ascertain, sanction, precedents, invoked* (2); *pliant* (3); *chancellor* (4); *commonwealths* (6); *tribunals* (8); *statutes* (9); *encroachment, expedited* (13); *domain, purport, vestiges* (14); *contingencies, litigation* (15); *subsequent* (16).
10. How many of the words listed in question 9 are technical terms? How many of these words have you heard repeatedly but only vaguely understood?

Writing

Write a brief topic outline of the essay. Do you find that Beard has already done much of the outlining for you?

HARRY J. FULLER · *Photosynthesis*

Photosynthesis is the fundamental process of food manufacture in nature and is the primary physiological process performed by leaves. The important product of photosynthesis is sugar,

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—From *The Plant World* by Harry James Fuller. Copyright 1941, by Henry Holt and Company, Inc.

which, in addition to the direct uses which it serves, is the basic food from which all other kinds of foods in nature are manufactured. Thus, photosynthesis makes possible the existence of all plants (except a few species of bacteria) and all animals. If any one physiological process of plants can be designated as "most important," photosynthesis is that process. Such a statement must be made guardedly, however, for without the processes of osmosis, translocation, chlorophyll-formation, etc., photosynthesis could not occur. Evaluated in terms of the importance of its products, photosynthesis may seem more important than these other processes but since all of the physiological changes of living organisms are interrelated, no one can be regarded alone without reference to associated processes.

Photosynthesis proceeds only in the chloroplasts of green plant cells and only in the presence of light. The raw materials which are combined in the process are **carbon dioxide** and **water,** and the products are usually **sugar** (glucose, or grape sugar) and **oxygen.** These substances combine and are formed in fixed proportions represented by the equation:

$$\text{Light energy} + \underset{\text{(carbon dioxide)}}{6CO_2} + \underset{\text{(water)}}{6H_2O} \rightarrow \underset{\text{(glucose)}}{C_6H_{12}O_6} + \underset{\text{(oxygen)}}{6O_2}$$

This formula states that six molecules of carbon dioxide combine with six molecules of water to form one molecule of glucose and six of oxygen. This formula merely indicates the reacting proportions and does not show anything of the doubtless very complex chemical reactions involved in the transformation of the raw materials into the products. Little is known of these intermediate chemical processes and thus the formula presented above must be interpreted as indicating merely the beginning and concluding phases of photosynthesis.

The actual weights of the raw materials used and the products manufactured in photosynthesis are:

$$264\text{ g. }CO_2 + 108\text{ g. }H_2O \rightarrow 180\text{ g. }C_6H_{12}O_6 + 192\text{ g. }O_2$$

In most plants, the first visible product of photosynthesis is starch, which is quickly formed from glucose as this sugar is manufactured in photosynthesis. In some plants, particularly such monocotyledonous plants as lilies and bananas, oils rather than starches are the first visible products of photosynthesis. Some plant physiologists believe that cane-sugar (sucrose) is the first product of photosynthetic activity, but the evidence seems to indicate that in most plants glucose is the first sugar formed in photosynthesis and that it may be transformed with the leaf cells to sucrose, starch, oils, or other more complex substances.

The carbon dioxide used in photosynthesis is obtained by leaves from the external atmosphere, of which it makes up approximately .03% to .04%, or 3 to 4 parts per 10,000 parts of air. Carbon dioxide is added to the air as a result of the combustion of fuels, of volcanic action, of rock weathering, of the decay of organic substances, and of plant and animal respiration. Simultaneously some of the carbon dioxide in the air is used in photosynthesis, so that the proportion of this gas in the air fluctuates but little. Carbon dioxide enters leaves through the stomata of leaves by simple gaseous diffusion from the region of higher CO_2 concentration (the external air) to that of lower CO_2 concentration (the air inside the leaf spaces).

Each stoma is enclosed by a pair of guard cells, turgor changes in which produce expansion or contraction of the cells and thus open or close the stoma. The inner-guard walls, those bordering upon the stoma, are much thicker than the outer walls, those which touch upon other epidermal cells. When the turgor pressure within guard cells increases, the outer, thinner walls expand more rapidly than the thick inner walls and pull the inner walls away from each other, thus opening the stoma. With a decrease in the turgor pressure, the thick inner walls straighten and move toward each other, closing the stoma. The factors responsible for turgor changes in guard cells are not fully known; it has been demonstrated, however, that light promotes the conversion of starch within guard cells to sugars. The increase in the concentration of sugars decreases the relative concentration of water within the guard cells which absorb water from surrounding cells and thus expand and open the stomata. The stomata of most plants are usually open to the greatest extent during the day; during this time, photosynthesis proceeds actively. At night, the concentration of sugars with guard cells decreases and water leaves the cells, which contract and close the stomata.

The CO_2 which diffuses into a leaf is used up in photosynthesis when it enters the leaf cells and thus its concentration is continuously lower inside the air spaces of the leaf than it is outside, as long as photosynthesis proceeds. When the molecules of carbon dioxide reach the walls of the mesophyll cells they go into solution in the water which saturates these walls and then diffuse in solution into the protoplasm of these cells, reaching the chloroplasts where photosynthesis takes place. Green plants ordinarily have abundant light, chlorophyll, and water for photosynthesis, but the supplies of CO_2 available to them are limited by the small concentration of this gas in the atmosphere. Because of the fact that the speed of the photosynthetic process under conditions of abundant light and moisture is usually limited by the low concentrations of carbon dioxide available, carbon dioxide is often termed the "limiting factor" in photosynthesis. It has been shown experimentally that an increase of as much as 20 times in the normal atmosphere concentration of carbon dioxide induces a corresponding increase in the rate of photosynthesis in some plants. Several greenhouses in this country are equipped with devices to increase the carbon-dioxide content of their air, for a more rapid rate of photosynthesis results in more rapid growth and frequently in greater yields of flowers, fruits, vegetables, etc. Experiments have also shown that the yield of certain field crops is increased if the air about them is enriched by the addition of carbon dioxide from pipes laid in or on the ground. Such "aerial fertilization" is still largely experimental, but may in the near future become of widespread practical importance in crop culture.

The water used in photosynthesis is absorbed by the roots of plants and moves upward into leaf blades through the xylem elements of roots, stems, petioles and leaf stems, as described in earlier chapters.

Photosynthesis is an energy-storing process and thus must have available for its operation externally supplied energy. This energy which makes photosynthesis possible is light energy which comes from the sun, or under artificial conditions, from electric lights. Of the various types of radiations, which reach green plants from the sun, the visible rays are most important in promoting photosynthesis, especially the red rays and to a lesser extent the blue-violet rays of the spectrum. Green and yellow rays are of relatively little value in furnishing energy for photosynthesis, for they are mostly reflected and transmitted by leaves, not absorbed as are the red and blue rays. Only those rays which are absorbed by the green cells of leaves can furnish energy for photosynthesis. Of the total solar energy reaching the leaves of plants, from .5% to 3%, depending upon other environmental factors and upon the species of plant in question, is actually transformed into the stored energy of sugar in photosynthesis. The remainder of this energy is reflected from the leaf surfaces, passes through the leaves, or is absorbed as heat. This process is thus exceedingly inefficient. If, however, one contemplates the enormous numbers of leaves on the earth's surface and remembers that green plants adequately nourish themselves and in addition all of the earth's animals, the inefficiency of this light utilization becomes insignificant. One of the most fundamental facts of nature is this: *that green plants alone are able to convert the energy of sunlight into forms which can be utilized by plants themselves and by animals.* Photosynthesis may thus be interpreted as a method of making a portion of the sun's energy available for nutritional use by organisms, and sugars and other foods derived from them may be regarded chiefly as stored energy which living organisms can utilize.

In the manufacture of 180 grams of sugar in photosynthesis, 674 calories[1] of active light energy are converted into the potential, chemical energy of food. A single gram of sugar contains approximately 3.75 calories of potential energy, which can be released in the process of respiration, as will be described in the next chapter. One investigation has estimated that a single acre of corn plants in Illinois makes an average of about 200 pounds of sugar per day during a single growing season and that in the total amount of sugar formed during the growing season about 33,000,000 calories of energy are stored.

The manner in which chlorophyll is involved in photosynthesis is not entirely understood. Chlorophyll acts as a light screen which absorbs the red, blue, and violet rays of sunlight and thus acts as an energy-absorber for sugar manufacture. It is probable also that chlorophyll is involved chemically in the process of photosynthesis for it is known to form an unstable union with carbon dioxide. The details of this probable chemical involvement of chlorophyll in photosynthesis are not known.

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[1] A calorie ("large calorie") is the amount of heat required to raise 1000 grams (about 1 quart) of water one degree centigrade. [Author's note.]

A portion of the oxygen formed in photosynthesis diffuses outward through the open stomata in accordance with the simple laws of diffusion. The liberation into the air of oxygen formed in photosynthesis constitutes the principal method of counterbalancing the oxygen used by plants and animals in their respiration and of maintaining thus a fairly constant proportion of this gas in the atmosphere. Another portion of this oxygen is used within leaves and probably other parts of plants in oxidation processes involved in respiration, as will be described in the next chapter.

The speed at which glucose is manufactured in photosynthesis varies in different species of plants and with changing environmental conditions. In bright light and warm temperature, leaves of most plants manufacture sugars at the rate of .5 to 1.8 grams (a gram is about 1/28 of an ounce) per hour per square meter (slightly more than a square yard) of leaf surface. These values represent averages and may fluctuate from hour to hour during the day. The glucose manufactured in photosynthesis may be utilized in a variety of ways. Some of it is oxidized in leaf cells or cells in other parts of plants in furnishing energy (respiration), some of it is used in the synthesis of other kinds of foods, some glucose is converted into starch, the most common storage carbohydrate food in plants, and some of it is used to form cellulose and other compounds necessary for growth and for the formation of new protoplasm (assimilation).

In most species of plants, as glucose molecules are formed in photosynthesis, they are converted almost immediately into starch which accumulates in leaf cells during the light part of the day. This behavior is advantageous, for starch is insoluble in water and thus does not affect the osmotic properties of cells, as sugar does. Furthermore, the conversion of sugar into starch results in a decrease in volume; that is, the starch does not occupy as much space as do sugars. During the night, when photosynthesis does not take place, much of the starch stored in the mesophyll cells during the day is transformed back into sugars, a portion of which is translocated through the veins and petioles to the stems and other portions of plant bodies to be utilized in the various processes described in the preceding paragraph.

The rate at which photosynthesis proceeds depends upon a number of factors, chief among which are: *temperature,* which is most favorable between 65° and 85° F., *carbon dioxide* as explained above, *light* intensity and quality, *water* supply available, *chlorophyll* concentration within the mesophyll cells, and *oxygen* concentration. Sunlight is most effective of all kinds of light in promoting photosynthesis and full sunlight is more effective than any of its component rays. Photosynthesis is carried on by the energy of artificial light but not so rapidly as under sunlight, largely because of the lower energy values of most kinds of artificial light. Although oxygen is not a raw material in photosynthesis, it is necessary for the normal functioning of the protoplasm of green plants and is thus a factor indirectly influencing photosynthesis.

The leaves of most plants may be considered as rather efficient photosynthetic mechanisms. They are usually broad and thin, and thus light penetrates readily all cells of the mesophyll. Their epidermal layers contain numerous stomata, through which carbon dioxide diffuses into the intercellular spaces of the mesophyll. These spaces afford ready paths of diffusion of carbon dioxide to all green cells of leaves. Further, the numerous ramifications of the vein systems carry water to all cells of leaves. Finally, the numerous chloroplasts of the mesophyll cells constitute the actual machinery in which the transformation of water and carbon dioxide into sugar is achieved.

Discussion

1. Define *photosynthesis* in your own words. Explain why it is called "the primary physiological process performed by the leaves" (paragraph 1).
2. What is the "first visible product of photosynthesis" (paragraph 4)? What are other products of the process?
3. How do plants assimilate carbon dioxide? Where does the photosynthesis take place? Can the process be speeded up?
4. How efficient is photosynthesis?
5. What advantages has starch over sugar as a substance to be stored in a plant?
6. Explain the paragraphing in the selection.
7. Compare the selection with Peattie's "Chlorophyll," pp. 217–226. What differences do the writers' anticipation of different audiences make in their styles?

8. Make a list of technical terms used in this passage, and be sure that you can define them.
9. List non-technical words which you did not fully understand. and be able to explain their use.

Discussion of Style in the Textbook Selections

1. What are the objects of textbook writing?
2. Keeping in mind the purposes of a textbook, what qualities of style would you say are of the highest importance in textbook prose? Why does the textbook writer usually avoid strong emotion, personal references, purely personal opinion, figurative language with an emotional intent?
3. Why are mechanical devices such as headings, numerals, and different sizes and styles of type employed?
4. In what respects is good textbook writing like any other kind of good expository writing?

SECTION 3 · *Exposition, Analysis, and Simple Argument*

ALAN DEVOE · *The Slowness of 'Possum*

For most of the animals of the earth, to be born is a tremendous shock. It is to come out of the warm fox-womb, where there has been no experience of troubling consciousness beyond, perhaps, such subawareness as stirs the being of an oak-tree or a mushroom-spore, into a tumultuous apprehension of sounds, movements, tactile impressions. It is to come abruptly out of the nonbeing of the grouse-egg into the blinding experience of the arching sky and the furious sun, and to exchange a silent dimness for a clangorous show of multicolored phenomena. Small wonder that probers of man's mind and spirit should often find in him a scar of "birth trauma." Small wonder that newborn animals should undergo, as their initial life-experience, a huge bewilderment.

Though birth is for most animals so abrupt and enormous a transition in modes of being, there is one woods-creature for whom the start of life is a much more gradual happening. The creature is the opossum; and its introduction into the experience of aliveness is as slow and gently protracted a process as may sometimes be—at the other end of the life-adventure—that leisurely dwindling and lessening which we call a "natural death."

Opossums are the sole North American representatives of a very ancient order of animal-life, the marsupials, and their lives have the quietness and easy tempo that are characteristic of many surviving mammals whose biological stock is very old. 'Possum-gait is a slow meandering shuffle; 'possum-temper is a placid tranquillity; 'possum-wits, in comparison with fox-wits or crow-wits, are dim and incurious and laboring.

Through the long millenniums of earth-inhabiting, the opossum has survived and prospered not by development of an agile mind, or by fleetness or fierceness, but by a kind of gentle slowness, a comfortable accommodation to environment, and by that persistent pursuit of a leisurely protective life-way which can sometimes be as effective a guarantee of species-survival as nimble wits and fleet agility. The way of the opossum is quietness and low-keyed placidness. The transitions in opossum-life are gradual and easy, the life-ritual unhurried. The quality of the opossum's life-pattern is evident from birth.

—From *Speaking of Animals,* copyright 1947 by Alan Devoe. Creative Age Press, publisher.

An adult opossum is as large as a cat, with grizzled fur, fox-sharp muzzle, an almost hairless tail more than a foot long. As it crouches quietly on an old stump, watching for the stir of crickets in the grass, or as it clambers among the high branches of a tree in unhurried search of fruits or nuts, it is nearly as conspicuous and sizable as a raccoon.

But at its birth, in a tree-hollow or an earth-den in the April of the year, it is far tinier than an acorn. It is a much smaller infant than an infant squirrel. Nor is it a full-formed infant, ready in a few days to open its eyes and grow to quick maturity. It has the look less of a newborn thing than of an unborn foetus. Blind, pinkly hairless, its tiny body foreshadows only faintly what the lineaments of adulthood will be. It can move a little, squirmingly; it can open its pink mouth; it has no other capabilities. No other capabilities, that is, but to respond to the drive of instinct that is born in it: to cling, upon expulsion from its mother's body, to her belly-fur, and presently to creep, laboriously, unknowingly, along her warm abdomen to a place where there is a furry pocket-like opening. The opening is her marsupial pouch, token of her membership in that ancient order which includes also kangaroos. Into the pouch the undeveloped infant inserts himself, snuggling in the protective womb-like darkness with his litter-fellows, sometimes a dozen of them. Unseeing, unknowing, he takes into his mouth a milky teat. He grows quiet, sucking. He has accomplished the first stage of his gradual birth into opossumhood.

For as long as six or seven weeks the baby opossum remains, suckling almost constantly, inside his mother's pouch. Slowly he grows and loses his foetus-look, and a silky down of soft opossum-fur covers him and he opens his black berry-bright eyes. It is crowded, now, with all the growing brothers and sisters in the warm elastic hiding-place, and they are jostled together uncomfortably as their mother swings with slow skill from twig to twig in the tree-tops or lumbers on her short legs to the den-shelter when she hears an owl.

Cautiously at first, then more venturesomely, the young opossums take to peeping out of the pouch-opening, acquainting themselves by degrees with the sights and sounds of the woods-world. So gradually is the young opossum thus introduced to the experience of life—and so placid, as well, is the spirit with which his old racial inheritance has endowed him—that by the time his weaning has been accomplished and he scrambles, on some propitious May evening, out of the sheltering pouch, he finds the universe no blinding bewilderment, as more precipitately born things must, but a familiar realm which he has long watched and into which he now can enter with comfortable at-homeness.

The young opossum, when he has left his mother's pouch, does not at once part company with her forever. The central theme in opossum-life is gradualness, slowness, passivity: a gradual birth, so to speak, that the little 'possum, with dimmer mind than most of his contemporary mammals have evolved, may not be projected with fatal suddenness into the experience of living; a slow learning, tentative, deliberate, of the way of the world; even, at the end, a death not in hot quick combat, but in the passiveness of the slumber that is called "playing 'possum."

So now, after the young opossum has quitted the maternal pouch, he does not at once go afield. With his brothers and sisters he clambers up on his mother's furry back. He clutches the shaggy hairs with his forepaws, and brings into play the serviceable gift which will mean much in his opossum-life: his opposable little thumb. He becomes, for the next few days of his life, an external passenger, as he was previously an internal one. On either side of their mother's back the young opossums cling in rows, their sharp little chins hooked over the ridge of her backbone to steady them, their strong-thumbed little hands holding fast to her pelt. They swing with her through the tree-tops; they doze when she dozes.

Now and again, when she arches her tail, squirrel-fashion, over her back, they wrap the tips of their own tails around hers and hang from it upside-down. The prehensile capability of their tails, thus learned and exercised, will be a not less useful endowment in their adult life than the flexible strength of their small thumbs. Jogging, swaying, watching with bright little black eyes the forest-world and the meadow-world, the young opossums ride their maternal caravan.

It is usually in the evening or the night when finally the young opossum climbs down from his mother's back and at last trundles off on short unhurrying legs to pursue alone the quiet rounds of adult opossumhood. For some days his mother has been obscurely impatient with him, nipping at him, shaking loose his tight grip on her fur and tail. There is a new stir in her furry pouch: another generation of tiny hairless babies has been born to her, evidence of that fecundity to which opossums owe their survival as much as to their hazard-avoiding life-pattern, slow and cautious. It is time for the older group of young ones to leave her and go alone.

The young opossum goes in the night, for he knows instinctively that darkness is his time. He trundles off, sniffing and investigating with his sharp muzzle, scrabbling leisurely among the fallen leaves with the clawed toes of his forefeet, grasping with the nail-less opposable thumbs of his hindfeet the trunks of bushes and saplings and hoisting himself up into them to look placidly around him in the darkness. He finds, presently, a little shelter that will serve as den: the concealing lee of a boulder, a hollow in a fallen log. He settles quickly into the pattern of his adult days, a pattern slow and unhurried as his infancy was, easy and deliberate, making no quick demands on the small brain in his pointed skull.

By day, mostly, he dozes, curled in his shelter. With the coming of the dusk he rouses and sets out on indolent hunting. As protective compensation for his dimness of mind he has not only a sluggish life-rhythm, a physical strength and adaptability to his world, and an instinctive habit of venturing abroad only in the concealing darkness, but also a greater gift: the gift of omnivorousness. He need devise no stratagems and skills in hunting. Almost all foods are acceptable to him. Prowling the streambank in the summer night, he finds frogs, snails, stranded minnows, which are ready provender. Clambering into the treetops, skillfully as a slower and heavier squirrel, he grasps branches with his prehensile tail, to steady himself, and munches seeds, fruits, insects. Placid, blinking his black eyes in the moonlight, he stuffs himself with the birds' eggs of summer, the nuts of autumn, in the south the persimmons that ripen when frost comes. His fifty primitive teeth, strong as a fox's, chomp busily all night. In the dawn, replete, he shuffles home to doze.

If he lives, the latter autumn will find him entering into a fitful sleep of hibernation, his mind dimming in bitter weather as protectingly as it came into gradual consciousness in the spring, then waking in milder spells to its normal low-keyed awareness again. And if, before the autumn comes, he should be killed by one of the many enemies that beset opossum-life as all other lives, even his death is no vivid and rigorous episode. When the panting fox overtakes him, when the wildcat pounces, he may hiss and growl a little, showing his teeth. But that is all.

It is no part of an opossum's dim and gentle nature to give battle. At the first snap of the enemy's teeth he subsides and curls up and appears to sleep or die. He "plays 'possum." Naturalists used to think he did it purposefully, as a wily trick. But the mind of an opossum is not an astute mind, privately clever. As Burroughs said, a 'possum is not himself wise; "Nature has been wise for him." His "playing 'possum" is not a trick. It is a sudden unwilled lessening of all his vital powers, and a blotting out of his consciousness, brought on by shock.

His opossum nature is not geared to quick and startling happenings. Tough and hardy though his flesh is, his nervous system cannot accommodate itself to the sudden and terrifying. The opossum is simply shocked, by an assault, into the unconsciousness of a faint. And so it comes about that even his death has something of the tranquillity, the dim peace, that has pervaded his living. When the predatory teeth reach his vitals, the opossum does not know it. The flickering little light that glowed in his small brain—the hazy understanding that comprised not much more than a knowing of the good smell of maternal fur, the pungent taste of persimmon, the obscurely apprehended joy of slow swingings in high moonlit branches—has long before that time been automatically extinguished into its last oblivion.

Discussion

1. Comment on the organization of the essay.
2. Is there any fact about the life of the opossum which serves as a unifying idea in the essay?
3. Why was it a good idea to begin with two paragraphs about birth?
4. What, in general, determines the sequence of paragraphs beginning with paragraph 6 ("But at its birth . . .")?
5. Show that the last paragraph of the essay does more than correct a common misconception—that it gives a final emphasis to an idea which runs through the whole essay.
6. Are there any words in the selection which you would not expect to find in a scientific or textbook treatment of the sub-

ject? What do such words suggest about the author's purpose in this essay?

Writing

Write a popular account such as the above of the life cycle or the habits and propensities of some animal. Base your account on observation if you can, but utilize information gained from reading, too. As an alternative assignment, base such an essay entirely on information gathered from books and periodicals.

ALAN DEVOE · *The Animals Sleep*

Not many creatures of earth are visible . . . in the frozen woods and fields [of December]. A walker there can see only the few thick-furred gray squirrels and hares and deer that are pelted for cold weather, and can hear no livelier bird-music than the small call-notes of hardy nuthatches and chickadees. In December the populace of wild things has a meager look. But could a man see underneath the surface of the frozen earth and below the icy mud of brook-beds, he would be aware of the presence of a tremendous number of beasts. Only a very few of the denizens of outdoors removed to other climates when the autumn cold came. Some of the summer birds departed, to be sure, and some of the insects died. But innumerable animals only retired to hidden places and went to sleep. By thousands, when the first frosts were felt, they subsided into that lethargy called hibernation.

Indians spoke of hibernation as the Long Sleep, but it is rather more than that. It is profound oblivion midway between sleep and death. It is an unknowing and unfeeling more deep and lasting than can be induced in man by the most powerful drugs, a suspension of life processes more thorough and protracted than even the "frozen slumber" which doctors have lately devised as a palliative of cancer. It is a phenomenon unique in nature, and though we are wiser about it than we were in those cradle-days of

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—From *Lives Around Us*, copyright, 1942, by Alan Devoe. Creative Age Press, publisher.

biology when Dr. Johnson thought that swallows passed the winter asleep in the mud at the bottom of the Thames, it remains a riddle still.

The season of hibernating begins quite early for some of the creatures of outdoors. It is not alone the cold which causes it; there are a multiplicity of other factors—diminishing food supply; increased darkness as the fall days shorten; silence—frequently decisive. Any or all of these may be the signal for entrance into the Long Sleep, depending upon the habits and make-up of the particular creature. Among the skunks, it is usually the coming of the cold that sends them, torpid, to their root-lined underground burrows; but many other mammals (for instance, ground squirrels) begin to grow drowsy when the fall sun is still warm on their furry backs and the food supply is not at all diminished. This ground-squirrel kind of hibernating, independent of the weather and the food supply, may be an old race habit, an instinctual behavior pattern like the unaccountable migrations of certain birds. Weather, food, inheritance, darkness—all of these obscurely play their parts in bringing on the annual subsidence into what one biologist has called "the little death." Investigation of the causes will need a good many years before they can be understood, for in captivity, where observation is more easy than in the wild, the hibernators often do not sleep at all.

The preparations for hibernation begin in early fall, and they are various. The insects—such as survive the winters in adult form—make ready by a drastic dehydration. Their bodies lose the moisture which they have in summer, and which would make them liable to fatal freezing, and become desiccated and brittle. Their reactions to the stimulus of light becomes, in most cases, the reverse of normal: beetles ordinarily attracted toward the light are violently repelled by it after dehydration. They creep to dark places. Some of them, like the May beetles, repair to deep sub-frostline tunnels in the earth; some of them seek out crannies under the loose bark of trees and interstices in stumps. With all their body tissues radically dried, and all their responses to stimuli slowed and dulled, they lapse into immobility. Their bodies are stiff and straight; wings and legs held parallel. They are ready to remain unmoving and foodless until the spring thaws come. They are ready to undergo the experience, common enough among the surface-hibernating insects, of being chilled to well below 32 degrees, Fahrenheit, without suffering injury.

The frogs, in making ready, betake themselves to the deep, soft mud of the brook-bottoms and the shelter of flat underwater stones. The toads, their soft bodies equipped with curious many-fingered lumps of fat to serve as food supply, burrow on cool September days into sandy garden soil or into the banks of their breeding streams, and with arched backs and indrawn legs grow motionless. The snails cease feeding, bury themselves among the moss and leaves, and secrete a covering over the openings of their shells. The trout swim leisurely upstream and grow quiet and unhungry; the spiders that have not perished in the first cold weather withdraw into burrows or spin themselves cocoons.

Most striking is the Long Sleep of the mammals. Raccoons, chipmunks, bats, bears, woodchucks—all these make ready in the autumn for a greater or lesser period of dormancy. They are all animals with imprecisely regulated body temperatures, these mammalian hibernators; during normal summer-time activity their temperatures often fluctuate by ten or fifteen degrees. They do not have a wholly static temperature, independent of the warmth of the outer air, as does a man or a wood-mouse or a winter-active deer. They can survive the months of northern cold and snow only by lapsing into a quiescence hardly distinguishable from death. Some of them sleep more deeply than others, some for the whole winter and some for only a part of it. The commonest of them, the woodchuck, serves as a fair exemplar. . . .

The woodchuck's hibernation usually starts about the middle of September. For weeks he has been foraging with increased appetite among the clover blossoms and has grown heavy and slow-moving. Now, with the coming of mid-September, apples and corn and yarrow-tops have become less plentiful, and the nights are cool. The woodchuck moves with slower gait, and emerges less and less frequently for feeding-trips. Layers of fat have accumulated around his chest and shoulders, and there is thick fat in the axils of his legs. He has extended his summer burrow to a length of nearly thirty feet, and has fashioned a deep nest-chamber at the end of it, far below the level of the frost. He has carried in, usually, a little hay. He is ready for the Long Sleep.

When the temperature of the September days falls below

50 degrees or so, the woodchuck becomes too drowsy to come forth from his burrow in the chilly dusk to forage. He remains in the deep nest-chamber, lethargic, hardly moving. Gradually, with the passing of hours or days, his coarse-furred body curls into a semicircle, like a foetus, nose-tip touching tail. The small legs are tucked in, the handlike clawed forefeet folded. The woodchuck has become a compact ball. Presently the temperature of his body begins to fall.

In normal life the woodchuck's temperature, though fluctuant, averages about 97 degrees. Now, as he lies tight-curled in a ball with the winter sleep stealing over him, this body heat drops ten degrees, twenty degrees, thirty. Finally, by the time the snow is on the ground and the woodchuck's winter dormancy has become complete, his temperature is only 38 or 40. With the falling of the body heat there is a slowing of his heartbeat and his respiration. In normal life he breathes thirty or forty times each minute; when he is excited, as many as a hundred times. Now he breathes slower and slower—ten times a minute, five times a minute, once a minute, and at last only ten or twelve times in an hour. His heartbeat is a twentieth of normal. He has entered fully into the oblivion of hibernation.

The Long Sleep lasts, on an average, about six months. For half a year the woodchuck remains unmoving, hardly breathing. His pituitary gland is inactive; his blood is so sluggishly circulated that there is an unequal distribution in the chilled body; his sensory awareness has wholly ceased. It is almost true to say that he has altered from a warm-blooded to a cold-blooded animal.

Then, in the middle of March, he wakes. The waking is not a slow and gradual thing, as was the drifting into sleep, but takes place quickly, often in an hour. The body temperature ascends to normal, or rather higher for a while; glandular functions instantly resume; the respiration quickens and steadies at a normal rate. The woodchuck has become himself again, save only that he is a little thinner, and is ready at once to fare forth into the pale spring sunlight and look for grass and berries.

Such is the performance each fall and winter, with varying detail, of bats and worms and bears, and a hundred other kinds of creature. It is a marvel less spectacular than the migration flight of hummingbirds or the flash of shooting stars, but it is not much less remarkable.

WALDEMAR KAEMPFFERT · *A Liner Leaves Port*

There is not much difference between the power plant of a great liner such as the *Queen Mary* or the *Queen Elizabeth* and the central station that supplies a city such as Boston or Detroit with electricity, except that the liner not only generates energy but applies it to drive propellers, light lamps, cook food, run lifts, make electric horses in the gymnasium jounce up and down. It is the compactness of these hundreds of pumps, motors, switchboards, these miles of asbestos-clad pipes that impresses. A watch is no more tightly packed with mechanism than is the hold with machines of a hundred different kinds.

The boilers are strung along the bottom in compartments, each as large as a ballroom. It is about as hard to enter one of these rooms as it is a bank vault. You pass through an airlock—a space between two hermetically sealed doors. Open the outer door and step into the space. At once the inner door is locked. It cannot be opened until the outer door clangs behind you. If for some good reason the inner door is open—an officer coming out of a boiler room, perhaps—the outer door is locked. Signal lights visible through windows tell whether the way is clear or not.

Why all this mystery and ceremony? The ship has what is technically called the "closed stokehold system." In plain English this means that the fans by which the oil fires are kept at white heat blow not directly into the furnaces but into the boiler rooms. So the air in the boiler room is above atmospheric pressure—not much, but enough to set up a rush through the fireboxes and funnels.

Forced draft depends on superatmospheric pressure in every one of the boiler rooms. If there were no airlocks, if a boiler room were to be entered or left with no precaution, the engineer in charge would know it quickly enough. A twitching indicator would show that the pressure is jumping up and down.

— From *Science Today and Tomorrow*, First Series, by Waldemar Kaempffert. Copyright 1939 by Waldemar Kaempffert. Reprinted by permission of The Viking Press, Inc., New York.

The boilers are more sensitive to "feed water" than the human stomach. There are objectionable mineral salts held in solution. Sooner or later they would crystallize inside the boiler tubes through which the water courses. And sooner or later nearly 150,000 tubes would be clogged. Every day 300 tons of fresh water are sucked out of the double bottom by centrifugal pumps, filtered, stirred up with a creamy solution of lime and soda, agitated by blasts of air, precipitated and otherwise reduced to a proper state of chemical impotency. To keep the water pure in an engineering sense, telltale instruments are periodically read. They indicate the chlorine and alkaline content.

If by any chance you could introduce a pinch or two of salt into a feedline, gongs would go off, lights would flare up ominously, fingers on indicators would point accusingly to danger marks, and an engineer would at once make an investigation. In fact, one way of testing the instruments is to pour a glass of first-class table water into the feed-water line. If the result is the expected instrumental anguish, all is well with the alarm system. There is also a little chemical laboratory where one of the engineers makes a few simple tests every day just to be sure that the water gulped into the boilers is of the required softness.

What goes into the boilers is no more important than what comes out of the funnels. Hence the flue-gas indicators. If there is too little carbon dioxide (which does not burn at all) and too much carbon monoxide (which does burn) the fires are not what they should be.

Thick masses of smoke curling out of funnels are not an engineer's conception of perfect combustion. The less smoke the better. Automatically every engineer on the ship glances up at a mirror when he passes certain places. It reflects down into the stokehold the beam from an electric lamp. The beam has to travel across the funnel. If there is no reflection there is too much smoke.

Nowadays large passenger liners are fired by oil. Gone are half-naked coal passers and stokers, gone the scraping and clanging of shovels, gone all the grime and much of the sweat. How much oil a record-breaking liner burns in a day is a dark secret. But since there are fast steamers that burn no more than six-tenths of a pound of oil for each horsepower in an hour it is a fair guess that 1100 tons of fuel oil a day will suffice when the *Queen Mary* or the *Queen Elizabeth* is doing her best.

Boiler and engine efficiencies have improved in the last twenty years. There is more superheating of steam than there used to be. Steam pressures are higher. Heat is saved as if it were tangible money. Before gases stream out of the funnels they preheat the air and the oil that reach the burners.

With dazzling flames roaring from 168 burners it might be supposed that the boiler rooms would be barely tolerable. It is just warm summer weather in the stokehold year in and year out. You can rest your hand on a boiler, so effectively does its overcoat of thick asbestos keep in the heat.

When the order comes down from the bridge for a burst of speed or the engineer in charge of the boilers sees that more steam will be needed, there is no excitement. He simply turns on more oil —turns it on himself or tells some junior officer to do it. Thereupon, nozzles out of which filtered oil sprays in fine jets burn with a little more intensity. But when the ship is to be driven hard he may order burner tubes removed and others of larger size substituted. It takes only a few minutes. Changing tires on an automobile is harder, more time-consuming. There is none of the fussing, none of the swearing, none of the fuming that we associate with Mississippi steamboat races of Mark Twain's time.

Aft of the aftermost boilers are the spacious engine rooms—two of them, spotlessly clean, separated by a bulkhead. Disappointment awaits you if you are thinking in motion-picture terms of old-fashioned engines. Here is a ship that has made over 32 knots—that may be actually making 30 as you stand amid her propelling machinery. And yet nothing apparently moves. The engine room of a ferry boat is far more active. There are no rods flashing in and out of tall cylinders, no thumping pistons. This little world is turbine-driven, and a turbine is simply a huge, horizontal, unromantic, drumlike box of steel in which turns a spindle carrying thousands of vanes. Shoot steam against the vanes just as wind is blown against a windmill and the spindle rotates. All that you see is the outer casing and that tells you no more of the whirling within than an unlabeled tin tells that it contains tomatoes.

Not until you reach the after end of the last turbine do you see anything that turns. There your eye falls on one of the four propeller shafts. They are hollow and as big as many city water mains. Watch them closely; their glint tells you that they are whirling. Far at the outer ends furious 35-ton four-bladed bronze propellers thrash the sea into a frothy wake.

Steam flashes through a turbine with the speed of a rifle bullet. After it has pushed and kicked the vanes of the high-pressure turbine around there is still so much energy in it that it can drive a first intermediate-pressure turbine, then a second intermediate and a low-pressure turbine. Finally it goes into a condenser—a gigantic box filled with thousands of tubes through which cold sea water constantly flows. By that time it is weary and tepid. What little life is still left in the form of heat the condenser absorbs. Chilled by the cold tubes, it falls in a rain. There is virtually no air in the vacuous condenser—nothing but the rain, which goes back again into the boiler feedline. Fresh water is too precious to waste.

Turbines are high-speed machines. The *Queen Mary's* or the *Queen Elizabeth's* sixteen (four to a shaft) spin at 3600 revolutions a minute. On the other hand, a propeller does its best work at 240. When turbines were the newest mechanical marvels, back in the nineties, their spindles were extended astern to become propeller shafts. With this arrangement the screws did not grip well. The water had no time to flow in. What the engineers called "cavitation" occurred. Hence the modern practice of driving propeller shafts through gearing.

The four sets of turbines have at the end of their common spindles helical pinions. The pinions mesh with gearwheels fourteen times as big. The big gears, of course, are on the inner ends of the propeller shafts. So by these meshing pinions and gears, housed in boxes, the 3600 revolutions of the turbines become 240 at the propellers.

The engine rooms are not silent. Fast machines hum. Gears drone. Yet because of the steadiness and the insistence you are scarcely aware of the assault on the ears. The engine room is tensely vibrant. Try to talk. The voice must be pushed out of the throat against the tension.

The liner draws on her maximum horsepower of 200,000 only when she is driving at well over 30 knots. When she picks her way through the crowded shipping of New York Harbor and the Hudson River, and maneuvers in and out of her berth, she needs only a fraction of all that power. Her turbines are therefore divided into two propulsion plants. Cut out either one and she becomes a twin-screw ship for the time being.

But this means in turn two engine-room staffs directed from the bridge. It also means two control platforms, which are of cerebral importance and which run right athwart the ship. They are like high bridges that overlook the entire engine room. Lean over the slightly oily steel railing and you see below the non-committal turbines and a score of auxiliary machines, pumps, electric motors, and huge steampipes lapped in asbestos.

The engineers on the platform glance occasionally at about a hundred instruments arranged on what is called the "dashboard." Gauges indicate the pressure of the steam that flings itself at the vanes in a turbine, tachometers count the revolutions made by the turbines and the propeller shafts, inclinometers show the tilt of the ship. Then there are oil-pressure measurers, vacuum gauges, voltmeters, ammeters, and thermometers to tell how hot the steam is.

All these instruments are in effect mechanical senses through which the ship's many machines communicate with the engineers on the two platforms. "Feeling fine, making 3200 revolutions a minute," reports a turbine spindle through a tachometer. "Oil pressure beginning to fall," warns another. "Vacuum's not high enough," says a third. The instruments are fairly steady, once the ship is under way. Some indicators hardly move for hours.

Because there are limits to what the human brain can grasp, the engineers do not rely entirely on the instruments. Long before danger points are reached in any important part of the propelling machinery, red lights flare up, gongs ring, whistles blow, klaxons scream. In addition there are many devices that prevent the making of a false move in turning a valve or throwing a lever—precautions that again take the form of suddenly glowing lights or clamoring gongs.

The bridge and the platforms can talk to each other through telephones as well as to other parts of the ship. But most of the communication takes place through engine telegraphs. The bridge has one set, each platform another—duplicates. For each of the four sets of turbines that drives a propeller there is a telegraph.

In the middle of a telegraph dial is a peremptory "Stop," and on either side of that are orders reading "Full," "Half," "Slow," "Dead Slow," and "Stand by." When the bridge signals "Slow," gongs ring and the indicator on the corresponding telegraph on the platform obediently moves to "Slow" on the left or "Ahead" side. The proper engineer on the platform moves a lever to "Slow," and an answering signal in bells signifies to the bridge that the order has been received. Maneuvering is so completely in the hands of the executive officer on the bridge that he telegraphs what particular sets of turbines are to do.

Starting the machinery is easy enough. It is done by means of horizontal wheels about three feet in diameter. The long spindles of the wheels extend to the steam valves. A turn of a wheel and steam shoots from a high-pressure nozzle into the high-pressure turbines.

Every minute of engine-room time is accounted for in a record kept by one of the engineers on the platform. When, for example, the *Queen Mary* leaves New York on a week-day morning, the movement log may look like this:

Starboard		*Port*[1]	
Astern slow	11.01	Astern half	11.21
Astern full	11.12½	Astern full	11.12½
		Stop	11.15
		Ahead half	11.16
		Ahead full	11.18
Stop	11.21		
Astern half	11.23½		
Astern full	11.24½		
Stop	11.26		
Ahead slow	11.26½	Ahead slow	11.24½

All this means that the liner with the assistance of busy tugs is backing out into the Hudson, that propellers are now churning ahead and now astern to head her downstream, that at last she is steaming slowly down the river into the bay. An hour and a half later the pilot shakes hands with the executive officer on the bridge, scuttles down several decks, clambers down a ladder over the side into a bobbing rowboat which takes him to the pilot boat.

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[1] This table, the author advises, was copied directly from the log of a great liner. The figure 11.21 at the top of the port turbine column would seem to be a typographical error for 11.01. [Editors' note.]

Then the engine telegraphs of both platforms ring "Stand by." A minute later comes the signal "Half" and then "Full."

The ship is on her way.

WALDEMAR KAEMPFFERT · *Who Invented It?*

Over 350,000 patents granted in a century, some 45,000 applications pouring into the Patent Office annually, about 31,000 patents granted in a year—surely we are the most inventive people in the history of the world. To most of us patents are meters that make it possible to read off our inventive voltage. How many patents are granted to each million of the world's principal populations? The answer ought to reveal where we stand as an inventive people.

Statisticians who adopt this easy method rush into pitfalls. Canada, for example, grants 85 per cent of her patents to foreigners, chiefly residents of the United States. But Canadians are much like ourselves. The number of patents issued to them in their own Dominion can be no indication of their technical ability, and Americans who patent their contrivances in Canada are obviously trying to invade a near-by market. Europe presents similar anomalies. In the typical year 1925 the Netherlands granted 368 patents and Belgium 2211. Can it be that of two small neighboring countries, so alike culturally, the one is six times as inventive as the other? Besides there is the nature of the patent grant itself. Some countries make it easy to protect an invention; others hard.

Luckily Mark Jefferson solved this problem. He compared the patents granted by 26 countries not to their own residents but to those of other countries—38 others. On this basis it turns out that the Dutch obtained a total of 1737 patents abroad and the Belgians 1559 in one typical year.

How does the United States fare when this yardstick is applied—land of Bell, Morse, McCormick and Edison? It stands

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twelfth on the list. Far above all other peoples tower the Swiss with 930 foreign patents granted to each million of them. We look like pathetic mediocrities with only 160, outdistanced by the Swedes (299 per million), the Austrians (298), the Germans (271), the New Zealanders (257), the Danes (236), the Dutch (233), the Norwegians (229), the French (195), the British (188), the Belgians (180). Jefferson has tested his conclusions in every legitimate way. No matter how he juggled his tables he always found the Swiss on top.

Patriots will not fail to point out that we are a vast, economically self-contained country; that we have rich and varied resources, a protectionist policy to discourage foreigners and a huge home market; that our population includes millions of Negroes who do not shine as inventors; that unlike Switzerland, we are not completely surrounded by industrially important countries. Admitting the validity of these and similar arguments Dr. S. C. Gilfillan re-explored the ground, devised new bases of comparison, made all the allowances that could be reasonably demanded. And still the Swiss came out first.

It dies hard—this lusty, patriotic myth of our inventive supremacy. For about a century enlightened philosophers have been trying to strangle it, meaning those to whom wars, religious movements, economic crises, research in science, experiments in new art forms, explorations in unknown parts of the earth, ascents into the stratosphere are the evidences of an uncontrolled impetus that carries not a single country but the whole species forward and up out of what is still a semi-barbarous state. To prove their point the sociologists and anthropologists cite scores of contrivances which were conceived simultaneously. Professor William F. Ogburn and Dr. Dorothy Thomas have compiled a list of 148 major scientific discoveries and inventions which made their appearance at about the same time. It would be no difficult task to add hundreds more. Elisha Gray and Alexander Graham Bell file patent applications for the telephone on the same day; Tessie du Motay (French) and Thaddeus Lowe (American) independently devise the process for making street gas by passing steam over red-hot coal; Kelly and Bessemer, the one in America and the other in England, discover how to make steel by blowing air through molten iron and thus burning out the carbon; Hall in America and Héroult in France hit within a month of each other on the same way to produce aluminum. Such instances occur over and over again in the history of technology. Every year there are hundreds of "interferences" in the Patent Office—judicial proceedings to settle the rights of inventors who apply for patents on identical machines and processes. Given the necessary environment, the inventions that we attribute to our peculiar genius are inevitable. It stands to reason that as soon as the steam engine is successfully pumping water out of mines and doing other useful work hundreds of mechanics think of mounting it on hulls to carry people and merchandise. Before there can be a locomotive a dozen inventors must overcome technical problems. The last man in the line—a man with the engineer's sense of proportion and technical fitness, who happens to be born at the right social and economic moment and who has the right backer—hammers the best ideas of the past into a practical whole. Whereupon the world acclaims him as the one and only inventor of the contrivance that he has perfected.

Take the steamboat. Who invented it? Robert Fulton certainly did not. About thirty steamers, more or less successful had been built before his *Clermont* plowed the Hudson in 1807. If we really want to boast we ought to hold up such geniuses as John Fitch, who steamed up and down the Delaware in 1790; Oliver Evans, who built for Philadelphia in 1804 a combined scow and dredge which ran as a steam automobile on land and as a steamboat on the Schuylkill; James Rumsey, who began his experiments in the presence of George Washington; and John Stevens, who built a screw-propelled steamer in 1799. In England William Symington was churning water with a paddle-wheel boat in 1787. His *Charlotte Dundas* (1802) was a notable success. Fulton knew all about these pioneers. Steam navigation in this country begins with him commercially because he and his partner, Livingston, were granted a monopoly for steam navigation on the Hudson River. If ideas are important—and they mean everything in invention—we ought to go back to Jonathan Hulls who received in 1736 a patent in his native England for a steamboat which he never built but which was at least a starting point. Trace the gasoline-driven American automobile of today back to its origin and a very little of it turns out to be American. Much was once made in this country of George Selden, a Rochester patent attorney, who in 1879 applied for a patent on an automobile with which his assignees held up the automobile industry for a time and actually collected $2,000,000 in royalties before Henry Ford successfully defended an infringement suit. Selden's claim to immortality is no better than that of Isaac de Rivaz, a Swiss who patented in France (1807) a gas-driven car; or of Lenoir who in 1860 built a little automobile with which he hoped to amaze the boulevardiers of Paris. Siegfried S. Marcus, an Austrian, began his experiments four years later. In the Technical Museum of Vienna there may still be seen a gas-driven car of his which he ran in 1875 until the police stopped him because he was disturbing the peace. Actually our cars are derived from those independently conceived and reduced to practice in Germany by Daimler and Benz between 1883 and 1885. Of the numberless engineering improvements since made very few can be credited to Americans.

Tell a European that Samuel F. B. Morse invented the electric telegraph about 1837 and you will make some astonishing discoveries in patriotism as well as in technological history. The Germans will point out with reason that their von Sömmering was telegraphing electrically in 1809 and that their Steinheil was applying the induction principle simultaneously with Morse. Go to England and you will find schoolteachers informing the young that Cooke and Wheatstone invented in 1837 a needle telegraph which is so called because a needle points to letters on a dial and thus spells out words, and which is so good that it has not yet been abandoned. Morse's famous invention turns out to be a combination of familiar principles, which is not against it as a practical invention but which places it in a truer light. Even the famous Morse code was an adaptation of the alphabet used in semaphore signaling.

Did Bell invent the telephone? He undoubtedly did. But a German will point to the instrument with which Philip Reis sent music but not speech over a wire in 1860—fifteen years before Bell. The French will put in a claim for their Charles Bourseul, simply because he had the right idea, though he never did anything with it. European newspapers were hailing him as a wizard in 1854, because his principle made such an appeal, and were actually calling his invention the "telephone."

Stampfer, the German, in 1833 first proposed the motion-picture film. But the idea had to be tossed from one nation to another before the Lumières in 1895 at last achieved what we call a practical success. Are we to believe the French when they insist that the predecessors of the Lumières counted for nothing? Or listen to Americans who point to the toy "stereophantascope" patented by Coleman Sellers in 1861 as the original of all motion-picture projectors? Or permit ourselves to be impressed by the admirers of Edison who claim that to him alone are we indebted both for the modern way of projecting film step by step and for the first "talkies?"

Who invented the modern process for making steel? Of course it was our Kelly (1851) who anticipated Bessemer, but who lost his case in our own courts for legal reasons. But most steel is now made not by the Bessemer but by the Siemens-Martin process. Siemens, a German, invented the necessary furnace (1861), and his French licensees, the Martin brothers, made great improvements. The blast furnace goes back to Darby, the Englishman (1713). So does the rolling mill.

Who invented the electric incandescent lamp? "Edison," shouts the whole country. But Joseph W. Swan, the Englishman, came out simultaneously with Edison in 1879 with a practical lamp. Some hold that its filament was even better—a closer approximation of what the filament eventually became in the hey-day of carbon. The glass tubes in which neon glows a piercing red on every Main Street are the conception of Georges Claude, a French physicist and engineer. Before his time there were dozens of experimental tubes in which gases and vapors had been electrified and thus made to shine—some German, some American, some French.

Who invented the reaper? Cyrus McCormick, of course, about 1833. But the Scotch reaper (1794), the Salmon reaper (1807), the Bell scissors reaper (1826) were all cutting swaths in European grain before McCormick made his first demonstration in Virginia.

Who invented the sewing machine? We hail Elias Howe. But there were successful sewing machines before he came forth with his in 1846. The Frenchman Thimmonnier's (1829) was so good that Parisian workers broke it up.

Who invented the elevator? Not Otis. He devised simply a safety brake. Miners had been hoisted and lowered in shafts for centuries before him. Even in its modern development the elevator is not American in origin. Armstrong (English) invented the hydraulic type (1846) and Siemens (German) the electric (1880).

Economic circumstances having changed with the passage from Europe, our inventions reflect not our originality but our needs. American locomotives are bigger and more powerful, our trains longer and heavier than their European counterparts because of our vaster country, our longer hauls. Railways as such were evolved in Europe. And so it is with most of the inventions that we hold up as proof of our technical supremacy. When we do invent something that looks strikingly original it turns out that Europeans thought of it before us or at about the same time. This is exactly what is to be expected. A culture is a pool to be tapped by any nation with the requisite social and economic environment and the requisite wit and ambition to become industrially great.

Inventions never leap from the inventor's brain to the drafting board—perfect. Like plants and animals they are evolutions. Out of slimy protoplasm came man; out of the rolling log the wheel. Gear is added to gear, rod to rod until at last a complex is created which has no nationality but which incorporates the ideas of a thousand separate imaginations. Before this evolution can occur there must be a technical heritage. Edison as a Cro-Magnon man would have invented not the incandescent lamp or the phonograph but some more efficient stone ax, some new spear. Before there could be Edison, Morse or Bell there had to be Volta, Faraday, Henry and a hundred others. And before these there had to be von Guericke and Franklin and wondering barbarians who extracted sparks from rubbed amber and fur.

As we review the procession of inventors who have made this the age of the machine we forget nationalities, forget the childish patriotism that ascribes this or that achievement to our unique genius. These mechanics to whom crankshafts, links and valves are as apt and telling as words to poets and who spring from a dozen different soils seem in the corridors of time like fellow craftsmen working successively through centuries at the same problem. One passes his conception and his limited success to the next, until after many long years and even generations we do away with the horse and the coach, leap through the air from New York to San Francisco, talk to one another through vast reaches of space, see one another's faces on a television screen. We cannot dispense with the Edisons, Marconis and Bells. They short-circuit the technical aspirations of the race. But their inventions we would have had sooner or later. It is the race that supplies the current, the drive on and up.

Discussion

1. Re-read the last three paragraphs. Show how the rest of the essay merely leads up to this statement of the author's doctrine of the way inventions are made.
2. What does Kaempffert have to say about the use of statistics?
3. What generally accepted notion is combatted in the essay?

STEWART H. HOLBROOK · *The Great Tillamook Fire*

It started a little after one o'clock on the hot and dry afternoon of August 14, 1933. Up to that hour the lookout forester perched on top of Saddle Mountain in western Oregon looked down on a world as handsome as man ever saw. Below him there were thousands upon thousands of acres of trees, taller than masts, greener than the sea, thick, straight, and old with the centuries—the fir named for David Douglas.

He loved this world beneath him, did the lookout, and guarded it with all of his faculties of sight, sound and smell. On this particular afternoon he was unusually alert, for the weather was bad. He scanned the hills, the valleys and the flats with a keen eye, looking for only one thing; and at a quarter past one on this August day he saw it. At that moment, as his eyes swept a wide arc to the north, a billow of white smoke came rolling up out of Gales Creek Canyon. He sighted along his fire finder a moment to make certain of the location, then picked up the telephone at his elbow and called his warden at Forest Grove, reporting in his usual laconic way and in the proper manner for lookouts, the section, township and range of what he said looked to be quite a smoke.

— From *The American Mercury*, December, 1946. Reprinted by permission of Stewart H. Holbrook and *The American Mercury*.

That was how first word of what was to be Oregon's greatest forest fire, indeed the greatest forest fire North America has ever known, came out of the woods. A moment before the lookout got on the phone, a logger on a crew working deep in Gales Creek Canyon had watched while a length of wire rope used in yarding timber sawed across a wind-felled tree. An instant later a thin puff of smoke curled up. In another instant it was whiter still, but not so thin, and the watching logger shouted. "Fire!" he cried. Fire it was, fire to burn up four centuries of trees, fire to remove an immense natural resource from the face of northwestern Oregon.

That was how it began, and this tiny beginning, so uncalled-for that the gods must have wept, was what the Pacific Northwest will remember for many a year as the Tillamook Fire. There have been forest fires more deadly to man than this one, but never one so deadly to trees, nor yet one so certain to be remembered so long.

Hundreds of men fought valiantly all night, on that August 14, and for all the good they did they might as well have remained in their camps. The fire leaped into the tops of the trees and swept on with fearful speed, making its own wind as it went. Those great trees, many of them 300 feet high, burned like tremendous torches. I saw one great body of Douglas firs, each nearly 500 years old, burn savagely like so many huge columns of fat, spitting, crackling, then roaring like flame under a bellows.

Smoke rolled and billowed above the flames. It formed, for two days, a pillar and mushroom that stood clear and white and terrible five thousand feet above the forest. Presently ashes were drifting through the screens of the windows in Portland homes, fifty miles away. The wind over the fire rose at last to a hurricane and the noise was greater than the sea pounding the Oregon shore. It rumbled and thundered and was marked by the deep booming of ancient trees uprooted by the gale and crashing down.

Five hundred more men, then a thousand more, then two thousand were hurried to the lines that now formed a front along a hundred miles; and mariners far at sea saw dead embers fall on the decks of their ships, while the tides piled debris two feet deep along the Oregon beaches. Tillamook County, Oregon's great timbered pride, was going up in flame and smoke. I saw it burn and I never expect to see another sight like it.

Logging camps and the homes of stump ranchers went up. Time after time, when the great blaze suddenly lashed out at the fire fighters like an angry snake, the crews had to turn and flee for their lives, leaving their trucks and bulldozers and pumps and hose and axes and shovels to burn on the spot.

Throughout the region deer in small herds and alone, frantic and confused, moved westward ahead of the flames, but many were caught and killed in their tracks. Cougars, the great cats of the woods, ranged with fear and uncertainty through the heavy smoke, coughing like humans and paying no heed to humans or deer. In a hundred streams, till then cool and clear, pools were soon white with the bellies of trout, dead from charcoal stomachs. (Fish leap at bits of charcoal, thinking them flies, and die from their lunch.) One could only guess, by the pitiful balls of naked flesh found after the fire had passed over, how the myriads of grouse and pheasants had fared.

A sudden shift of the wind, on the tenth day of the conflagration, brought immediate danger to Camp McGregor, logging headquarters of the Oregon-American Lumber Company. An hour later the main body of the fire was only half a mile from the camp, and spot fires were springing up within a few yards of the buildings. Men fought these near fires, a rear-guard action, while wives and children were loaded aboard a logging train. The train pulled out just as the camp itself started to burn fiercely. It pounded down the mountain, rocked around curves and crossed dizzily-high trestles that were beginning to smolder, while back on the mountain the camp was going up in smoke.

The little hamlet of Elsie, set almost in the middle of this gigantic destruction, was soon surrounded by the fire, and for twenty-four hours it was believed that Elsie and all it contained had been wiped away. But through some quirk in the wind, Elsie survived. Not so another hamlet, Lukarilla. Settlers watched while Lukarilla, with its homes and barns and fences and one store, disappeared entirely. Strangely enough there was no loss of life here. Only one person died in all the fire, Frank Palmer, a CCC boy from Illinois, who was killed instantly when a big fir, uprooted by the wind, crushed him to earth.

The blaze burned itself out on August 24, after a fog blanket drifted in from the coast to smother it. In ten days it had killed twelve and one-half billion feet of fine timber. It burned over some 310,000 acres. How can one describe twelve and one-half billion feet of timber? There is no use piling it up, in Sunday-supplement style, beside the Empire State Building, which it would put in shadow many times over. But perhaps it will mean something to know that during the year 1932, twelve and one-half billion feet of logs was enough to supply the needs of all the sawmills, lath mills, shingle mills and pulpwood mills in the forty-eight states.

II

Desolation is the word to fit the scene in Tillamook County following the fire—the Tillamook Burn, as it is called, covers an area half as large as Rhode Island. No man who has stumbled through the thick ashes and over the blackened windfalls will forget it: the stary silhouettes of trees; the stumps and snags like sable tombstones; the acres as far as the eye can reach, all barren; the desolate silence, as though a cosmic hush has fallen over the stricken forest.

This terrible quiet, as though all nature were brooding over the tragedy, will induce a mood hard for a man to shake off, especially so for a man who loves the forest, because he knows very well that a forest in its natural state is never quiet, never completely hushed. In summer the noises, though often muted, are obvious to the ear—the noises of countless beasts and birds going about their daily or nightly work of making a living. In winter, winds and frost add their bit of noise to that of the fauna still active, such as the squeak of a wood mouse under the snow or the soft *whissh* of a hunting owl.

That is why the utter silence of a burned forest fastens melancholy on a man—he knows that nothing lives in this stark area, no tree, no beast, no bird, and often no fish. Gibbon sat amid the ruins of Rome and pondered the decline and fall of an entire civilization. Many a woodsman has sat on a blackened stump and pondered the destruction of an empire of forest with all it contained, wondering how many of its denizens escaped, how many tragedies of nest and burrow occurred. Were the young grouse able to follow their frantic mother out of the strange danger? Did some doe warn its mottled fawn in time—and did they run in the right direction? Did any fire department of the woods run a ladder up to the fourteenth story of an old snag where some flickers were nesting? And what happened to the sly, lone fox, a-mousing in the swamp, when suddenly he found fire on all sides?

III

Man was responsible for this devastation of an empire of timber. And promptly man set out to salvage what he could. Before the 1933 blaze had ceased to smolder, timber owners had formed a cooperative logging concern, and in the next dozen years had salvaged about one-third of the killed timber.

It is perhaps necessary to explain that fire does not burn up completely such gigantic trees as those in the Tillamook forest: what it does is kill them, whereupon hordes of parasites immediately set to work to eat up or rot the dead but still standing timber.

During the dozen years when salvage operations were going forward, nature was also taking a hand, trying to rectify the damage. The seed sources were many and they proved wonderfully fruitful; new growth sprang up and started to cover the ghastly scars, clothing the hills and valleys with new green. By the middle of 1945 on many thousands of acres there was timber, new timber, as tall as a small house.

I went over much of the Burn early in 1945 and was cheered by what I saw. The forest already was tall and thick enough for a man to get lost in. Birds had returned to the area. So had animals, and the elk and deer were numerous. Again the streams were clear and cold. Many trout leaped in them. Indeed, all was going well until a year ago, in 1945.

What happened then compounded tragedy on tragedy, and a part of this new disaster probably stemmed from the war in the Pacific. This was the manner of its coming:

Early in the morning of July 9, 1945, a watchman on the Salmonberry River, in Tillamook County, roused to find the canyon beneath his station filled with smoke. The sight gave him the creeps, and with good reason, for forest fires do not ordinarily start at such an hour, when humidity is high and the dew is heavy on trees and underbrush. The smoke appeared to have its source in an almost inaccessible spot, a high bluff across the canyon. Many woodsmen thought then, and still think, that this fire was touched off by one of the Japanese incendiary balloons which had been falling in the Pacific Northwest since late in 1944.

In any case it was fire. The weather was ripe; humidity quickly fell as a wind like the breath of an open-hearth furnace swept down the Columbia River gorge and so on into Tillamook County. Inside of two hours a great pillar of smoke, something like the one that rose here in 1933, had risen about four thousand feet. I stood on a ridge twenty miles away that afternoon and watched the cloud grow dreadfully fast. That night the whole horizon had a fitful red base.

The fire burned on. Two days later, as if planned by some horrible and efficient coordinator of forest fires, a second blaze broke out in Tillamook County, this time at Wilson River. This one was not set by an incendiary balloon from across the Pacific but (probably) by the cigarette of an employee of a logging concern. Twelve hundred men went to fight both fires. Their efforts, like those of twelve years before, were as nothing. The Salmonberry blaze and the one at Wilson River grew swiftly, and then, merging, blew up into one great holocaust.

It was 1933 all over again, only this time it was for the most part a new forest that was being destroyed; and this time it burned longer, for no heavy fog blanket came in from the coast to stop it. The second Tillamook fire roared on through July, August, September and into October, covering an area of more than 150,000 acres, nearly all of it burned once before.

What makes the Tillamook Burn so deeply tragic is that so much of the area has undergone fire at least twice. A once-burned forest will recover, for seed sources are left from the older trees. But there is no hope for a forest burned a second time as thoroughly as this one was. The second time the flames took everything, including such seeds as were stored in the forest floor, and virtually all of the trees from which seeds might be expected to blow onto the devastated acres. Unless man were to take hold in a big way, nothing but weeds would grow here and even weeds would have a hard time of it in the burned-out soil.

It is fortunate that Oregon has for its state forester a man who grew up in the Tillamook woods, a man who is more often in the woods than in his office. Nelson Rogers is now facing the most gigantic job of reforestation any man has ever faced, for this vast and desolate region must be planted by hand, either with seeds or with young trees, or with both. Rogers is equal to the task, and long since he has had his young men at work, planting thousands of seedlings every day, making firebreaks and roads for protection, and telling the state of Oregon he must have $750,000 a year for the next six years if the job is really to get going as it should. His young men have invented two new tools that will speed the planting fivefold, and his entire department, loathing the Tillamook Burn as only foresters can, is working enthusiastically.

But it will be many years before the Tillamook Burn will be anything more than a horrible example of what forest fire can do.

DONALD CULROSS PEATTIE • *Plant Hunters*

When in 1870 an American missionary in Bahia, Brazil, happened upon a particularly big, juicy, seedless orange, he had the enterprise to send six young trees to the Department of Agriculture back in Washington. Two of these seedlings were presented to a homesteading couple on their way to Riverside, California. Only twenty years later, California was glad to inform Uncle Sam that this new navel orange had brought the State more money than it had cost to run the entire U. S. Department of Agriculture from its foundation.

This triumphant example of plant introduction was a random one. But it pointed the way. Who knew what potential profits for our fields and orchards were growing, all unguessed, in far-off lands? What America needed was a long-range master plan of plant importation, beyond the means of States or individual enterprise.

One day in the Nineties, Dr. David Fairchild, a young Kansan, walked into the office of the Secretary of Agriculture, James Wilson, and proposed a corps of explorers to scour the world for new crops. This sounded to the seasoned old Secretary like a dream—and a good one. All he could offer at the time was one explorer, N. E. Hansen, a Dane from our wheat belt, and for Fair-

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—From *The Yale Review*, Autumn, 1944. Reprinted by permission of *The Yale Review* and Donald Culross Peattie.

child himself a cubby-hole office in the blazing attic of the gingerbread red-brick building that then housed the entire Department. An abandoned barn had to serve as warehouse for the flood of seeds and cuttings which Hansen was soon sending in.

Such was the humble beginning of the Department's most colorful service. The Division of Plant Exploration and Introduction is famous now from Capetown to London, from Java to Rio de Janeiro.

David Fairchild planted the seed. With Hansen's discoveries it sprouted. But it was long before the fruits were ripe. For time is needed to prove the worth of a new plant introduction. It takes years of breeding work in the experiment stations to perfect it; soil and climate right for the cherished immigrant must be found, farmers' conservatism, buyers' prejudice, be overcome. Millers, processors, wholesalers, retailers, and the woman with the shopping bag all have to learn to appreciate the product. But today Hansen's work is deep-rooted. In many years and thousands of miles of travel over Russia, Siberia, Turkestan, Finland, the Caucasus and Transcaucasia, China, Japan, and Manchuria, Hansen gathered hardy plums, pears, and apples for our North, a broomcorn millet adapted to our dry States, and the Cossack alfalfa that, starting from a spoonful of seed, was to spread all over the prairie States.

Dr. Fairchild himself has circled the globe again and again, a master plant hunter, an ambassador with a green thumb. But chief of his gifts has been that for picking the men. Great plant explorers are rarer than the choicest of their finds. Such a man must be both a trained botanist and a practical plantsman, able to cut budwood that will live and pack seeds so they will neither die nor sprout on a voyage through frigid and torrid zones. He must be at ease with prince and peasant. He must be quick to learn strange tongues, strong, preferably young, and with a digestive system accommodating to the worst. He must, in wrinkled China or on some breathless slope of the Andes, be quick to recognize in fruit or grain or tree a plant that may add new wealth to Ohio cornlands or Oregon orchards.

Dr. Fairchild discovered Frank N. Meyer, a stout-hearted, stocky Hollander, at the botanical garden in St. Louis. Because the chief need then was a more diversified agriculture for our arid Northwest, Fairchild sent Meyer to the similar climes and soils of

China, Mongolia, Turkestan, and Manchuria. In four long expeditions lasting eleven years, Meyer was insulted, assaulted, denied exit, denied entrance, and arrested more times, probably, than any other man in the service. He was mobbed; he was attacked by footpads; he was deserted by his guides. Yet, by swaying camel caravan, by rocking river junk, Meyer brought out such living treasures as early flowering cherries, cold-resistant almonds, hardy yellow roses, an odorless cabbage, a puckerless persimmon, blight-resistant chestnuts and pears. His greatest gift to America was his Mongolian elm. It flourishes now on our treeless plains where a New England elm would die of cold or wither with drought. Its shade today blesses the dooryards of thousands of prairie homes, and breaks the searing winds. To Frank Meyer, drowned in the Yangtze, these trees are forever memorial.

Mark Carleton, of Kansas, set out for Russia to search for hardy cereals. Thousands of miles away on the Kirghiz steppe, he found at last the wonderful durum wheats which have expanded wheat culture far out over our light-rainfall belt. Carleton's durums put millions into the pockets of American farmers. He himself died in poverty on a foreign shore.

And there was Wilson Popenoe, now past-master of tropical fruit culture, whom Fairchild discovered when he was only twenty but already an expert plantsman and explorer. A thing called the "alligator pear" was then struggling for a market, and the growers needed better varieties to offer a prejudiced public. So Fairchild sent Popenoe to Guatemala and Mexico, the aboriginal home of the wild avocado, where the Indians had been improving its strains from pre-Columbian times. Popenoe mastered Indian tongues and ways, and charmed cuttings of budwood from trees cherished by their clannish owners. It was this new blood that improved the flavor of the avocado. When the growers had to patrol their grounds against orchard thieves, they knew they were over the hump. The avocado has now won its way to popularity on the American table.

Popenoe had been only fifteen when, like Marco Polo, he set out, with his uncle and his brother Paul, on a journey to the Far East. The quest then was for better dates. The romance of the date palm had already fired Fairchild and Walter Swingle, the great Oriental expert, who made for the Sahara to hunt out superior varieties—a search that the Department continued for thirty years.

It led Swingle and his men to ransack the oases of Algeria and Tunisia, the stately groves in the land of the pyramids, the ancient date plantations of Baghdad itself and of the Garden of Eden country near the site of Babylon. As a result, the hottest deserts of Arizona and California now are green with palms yielding a fruit which once came to us only in ships.

It is a purpose of the Division to make the United States, wherever possible, independent of the importation of foreign plant products. Thus when, back in 1904, Dr. Fairchild found that American manufacturers were taking a brisk interest in tung oil, he was quick to import seeds of the Chinese tree. Used in the preparation of hard varnishes, quick-drying enamels, automobile paints, and linoleum, some 176 million pounds of this oil were by 1937 coming into this country at a cost of 20 million dollars annually. Then the Japanese closed the ports of China, and the tung oil ceased to flow to us. But already Dr. Fairchild's seeds had become great plantations; today tung oil is a standard crop along the Gulf Coast.

The wonder plant of American agriculture has been the soya, or soy bean, which has risen in forty years from an obscure forage crop grown in a few counties of Pennsylvania and New York to one of the nation's greatest industrial crops—owing to the Plant Exploration Division's work for the Department of Agriculture. The oil extracted from it is utilized in the production of candles, waterproofing, textile dressing, paper-sizing, linoleum, paints, rubber substitutes, celluloid, soaps, glue, lubricating oil, and the plastics.

This versatile extract of the soya we had long been importing in ever increasing amounts. It was sharp-eyed Meyer who sent home the first seeds of the oil-yielding strains to reach us.

Howard Dorsett and Dr. W. J. Morse, the Department's forage crops specialist, roamed Manchuria when the country was infested with robber bands and Japanese agents were everywhere fomenting trouble. They sent home thousands of shipments of soy beans so that today we grow a 100-million-dollar annual crop.

As the fame of the Division of Plant Exploration grew, nurserymen and farmers turned to it for help. Was there a bacterial wilt disease in the alfalfa fields of the Middle West? Experts hastened to Turkestan, the original home of wild alfalfa, to find fresh, healthy strains. Were onions being devoured by thrips? The home of the wild onion in central Asia was successfully searched by our field men for a resistant type.

Not only new but old crops profit by the Division's work. Cotton grows in the desert Southwest largely because of Thomas Kearney, who has just retired after fifty years of service. From Egypt, Fairchild himself sent a long-staple cotton adapted to the climate and soils of Arizona. But Kearney, in decades of breeding work and further exploration in Egypt, perfected it. From Mexico, O. F. Cook, the great cotton expert, and other government plant explorers brought strains of upland or short-staple cotton fit for a region with continuous growing season and irrigation. That spelled California, and there, far beyond the range of the boll weevil, grow today 350,000 acres of this "Acala," which holds the record for yield per acre. California is so enthusiastic about Acala that it has passed a law forbidding farmers to raise any other kind. Half a million bales of it yearly go to the spinners.

As if a hurricane had struck it, the rice industry, once the pride of the South Atlantic coast, lay prostrate after the Civil War. The aristocratic planters had died on the field of glory, the slaves had fled, dykes were broken, weeds high, the market was lost. The swamps went back to the herons and bullfrogs. But rice, as the Department of Agriculture knew, can also be grown as an upland crop, reaped by a combine just like wheat, sown even by airplanes. Upland rice is an old story in Japan and China. S. A. Knapp of the Department made a trip to Japan for better varieties of upland rice that gave America's rice industry a transfusion. For thirty years Uncle Sam was busy improving the strains of his home-grown rice—until a day came when Japanese merchant ships appeared in the Houston ship channel to buy rice from the Americans!

We grow today hardly a crop that isn't indebted to plant introduction for betterment. Ladino clover for the North Atlantic States, timber bamboo for the South Atlantic, mangoes for Florida, crested wheat grass for North Dakota, Bahia grass for the Gulf Coast—these are but a handful of the 140,000 introductions of the Division of Plant Exploration.

We have not only brought them into our country—we have sent them out in great quantities. Uncle Sam is not trying to build up any plant monopolies, nor does he hoard his superior strains. Upon request by friendly powers, he exports propagating material as freely as he imports it, reciprocating thereby the thousands of gifts to us by foreign scientists and governments. At present the greatest demand comes from our Latin-American neighbors, and it is gratified by him, with every best wish for their success.

From its four acclimatization stations—in Florida, California, Georgia, and Maryland—the Division has sent forth its Americanized new plant citizens. These plants, imported at such trouble, grown and propagated under such scientific conditions, go first into the hands of experts. They are chiefly hybridizers, working, as a rule, on experimental farms operated by the forty-eight States, or by agencies of the Department of Agriculture. When the plant immigrant has been tested there, and perhaps improved, it is ready for distribution to commercial growers. Then the Division turns its eyes again to foreign lands, hunting some better grain for your fields, some new vegetable for your table, some tree for your dooryard or flower for your garden.

Writing

Choose one of the following topics, or a similar one, for an informal type of research essay: the importation and development of a single kind or species of plant or animal; the founding of some social service which has proved valuable: of Hull House or some other big city settlement house; of the Boy Scouts or Girl Scouts; of the 4-H Club; of American Legion baseball.

DONALD CULROSS PEATTIE · *Chlorophyll: the Sun Trap*

1 What we love, when on a summer day we step into the coolness of a wood, is that its boughs close up behind us. We are escaped, into another room of life. The wood does not live as we live, restless and running, panting after flesh, and even in sleep tossing with fears. It is aloof from thoughts and instincts; it re-

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—From *Flowering Earth*, by Donald Culross Peattie. Copyright, 1939, by Donald Culross Peattie. Courtesy of G. P. Putnam's Sons.

sponds, but only to the sun and wind, the rock and the stream—never, though you shout yourself hoarse, to propaganda, temptation, reproach, or promises. You cannot mount a rock and preach to a tree how it shall attain the kingdom of heaven. It is already closer to it, up there, than you will grow to be. And you cannot make it see the light, since in the tree's sense you are blind. You have nothing to bring it, for all the forest is self-sufficient; if you burn it, cut, hack through it with a blade, it angrily repairs the swathe with thorns and weeds and fierce suckers. Later there are good green leaves again, toiling, adjusting, breathing—forgetting you.

2 For this green living is the world's primal industry; yet it makes no roar. Waving its banners, it marches across the earth and the ages, without dust around its columns. I do not hold that all of that life is pretty; it is not, in purpose, sprung for us, and moves under no compulsion to please. If ever you fought with thistles, or tried to pull up a cattail's matted rootstocks, you will know how plants cling to their own lives and defy you. The pond-scums gather in the cistern, frothing and buoyed with their own gases; the storm waves fling at your feet upon the beach the limp sea-lettuce wrenched from its submarine hold—reminder that there too, where the light is filtered and refracted, there is life still to intercept and net and by it proliferate. Inland from the shore I look and see the coastal ranges clothed in chaparral—dense shrubbery and scrubbery, close-fisted, intricately branched, suffocating the rash rambler in the noon heat with its pungency. Beyond, on the deserts, under a fierce sky, between the harsh lunar ranges of unweathered rock, life still, somehow, fights its way through the year, with thorn and succulent cell and indomitable root.

3 Between such embattled life and the Forest of Arden, with its ancient beeches and enchanter's nightshade, there is no great biologic difference. Each lives by the cool and cleanly and most commendable virtue of being green. And though that is not biological language, it is the whole story in two words. So that we ought not speak of getting at the root of a matter, but of going back to the leaf of things. The orator who knows the way to the country's salvation and does not know that the breath of life he draws was blown into his nostrils by green leaves, had better spare his breath. And before anyone builds a new state upon the in-

dustrial proletariat, he will be wisely cautioned to discover that the source of all wealth is the peasantry of grass.

4 The reason for these assertions—which I do not make for metaphorical effect but maintain quite literally—is that the green leaf pigment, called chlorophyll, is the one link between the sun and life; it is the conduit of perpetual energy to our own frail organisms.

5 For inert and inorganic elements—water and carbon dioxide of the air, the same that we breathe out as a waste—chlorophyll can synthesize with the energy of sunlight. Every day, every hour of all the ages, as each continent and, equally important, each ocean rolls into sunlight, chlorophyll ceaselessly creates. Not figuratively, but literally, in the grand First Chapter Genesis style. One instant there are a gas and water, as lifeless as the core of earth or the chill of space; and the next they are become living tissue—mortal yet genitive, progenitive, resilient with all the dewy adaptability of flesh, ever changing in order to stabilize some unchanging ideal of form. Life, in short, synthesized, plant-synthesized, light-synthesized. Botanists say photosynthesized. So that the post-Biblical synthesis of life is already a fact. Only when man has done as much, may he call himself the equal of a weed.

6 Plant life sustains the living world; more precisely, chlorophyll does so, and where, in the vegetable kingdom, there is not chlorophyll or something closely like it, then that plant or cell is a parasite—no better, in vital economy, than a mere animal or man. Blood, bone and sinew, all flesh is grass. Grass to mutton, mutton to wool, wool to the coat on my back—it runs like one of those cumulative nursery rhymes, the wealth and diversity of our material life accumulating from the primal fact of chlorophyll's activity. The roof of my house, the snapping logs upon the hearth, the desk where I write, are my imports from the plant kingdom. But the whole of modern civilization is based upon a whirlwind spending of the plant wealth long ago and very slowly accumulated. For, fundamentally, and away back, coal and oil, gasoline and illuminating gas had green origins too. With the exception of a small amount of water power, a still smaller of wind and tidal mills, the vast machinery of our complex living is driven only by those stores of plant energy.

7 We, then, the animals, consume those stores in our restless living. Serenely the plants amass them. They turn light's active

energy to food, which is potential energy stored for their own benefit. Only if the daisy is browsed by the cow, the maple leaf sucked of its juices by an insect, will that green leaf become of our kind. So we get the song of a bird at dawn, the speed in the hoofs of the fleeing deer, the noble thought in the philosopher's mind. So Plato's Republic was builded on leeks and cabbages.

8 Animal life lives always in the red; the favorable balance is written on the other side of life's page, and it is written in chlorophyll. All else obeys the thermodynamic law that energy forever runs down hill, is lost and degraded. In economic language, this is the law of diminishing returns, and it is obeyed by the cooling stars as by man and all the animals. They float down its Lethe stream. Only chlorophyll fights up against the current. It is the stuff in life that rebels at death, that has never surrendered to entropy, final icy stagnation. It is the mere cobweb on which we are all suspended over the abyss.

9 And what then is this substance which is not itself alive but is made by life and makes life, and is never found apart from life?

10 I remember the first time I ever held it, in the historic dimness of the old Agassiz laboratories, pure, in my hands. My teacher was an owl-eyed master, with a chuckling sense of humor, who had been trained in the greatest laboratory in Germany, and he believed in doing the great things first. So on the first day of his course he set us to extracting chlorophyll, and I remember that his eyes blinked amusement behind his glasses, because when he told us all to go and collect green leaves and most went all the way to the Yard for grass, I opened the window and stole from a vine upon the wall a handful of Harvard's sacred ivy.

11 We worked in pairs, and my fellow student was a great-grand-nephew or something of the sort, of Elias Fries, the founder of the study of fungi. Together we boiled the ivy leaves, then thrust them in alcohol. After a while it was the leaves which were colorless while the alcohol had become green. We had to dilute this extract with water, and then we added benzol, because this will take the chlorophyll away from the alcohol which, for its part, very conveniently retains the yellow pigments also found in leaves. This left us with a now yellowish alcohol and, floating on top of it, a thick green benzol; you could simply decant the latter carefully off into a test tube, and there you had chlorophyll extract, opaque, trembling,

heavy, a little viscous and oily, and smelling, but much too rankly, like a lawn-mower's blades after a battle with rainy grass.

12 Then, in a darkened room where beams from a spectroscope escaped in painful darts of light as from the cracks in an old-fashioned magic lantern, we peered at our extracted chlorophyll through prisms. Just as in a crystal chandelier the sunlight is shattered to a rainbow, so in the spectroscope light is spread out in colored bands—a long narrow ribbon, sorting the white light by wave lengths into its elemental parts. And the widths, the presence or the absence, of each cross-band on the ribbon, tell the tale of a chemical element present in the spectrum, much as the bands on a soldier's insignial ribbon show service in Asia, in the tropics, on the border, in what wars. When the astronomer has fixed spectroscope instead of telescope upon a distant star, he reads off the color bands as easily as one soldier reads another's, and will tell you whether sodium or oxygen, helium or iron is present.

13 Just so our chlorophyll revealed its secrets. The violet and blue end of the spectrum was almost completely blacked out. And that meant that chlorophyll absorbed and used these high-frequency waves. So, too, the red and orange were largely obliterated, over at the right hand side of our tell-tale bar. It was the green that came through clearly. So we call plants green because they use that color least. It is what they reject as fast as it smites the upper cells; it is what they turn back, reflect, flash into our grateful retinas.

14 It was only routine in a young botanist's training to make an extraction and spectrum analysis of chlorophyll. My student friends over in the chemistry laboratories were more excited than I about it. They were working under Conant, before he became president of Harvard and had to sneak into his old laboratory at night with a key he still keeps. For chlorophyll was Conant's own problem. His diagram of its structure, displayed to me by his students, was closely worked over with symbols and signs, unfolded to something like the dimensions of a blue print of Boulder Dam, and made clear—to anyone who could understand it!—how the atoms are arranged and deployed and linked in such a tremendous molecule as $MgN_4C_{55}H_{72}O_5$.

15 To Otto and Alfred and Mort every jot and joint in the vast Rube Goldberg machinery of that structural formula had meaning, and more than meaning—the geometrical beauty of the one right, in-

evitable position for every atom. To me, a botanist's apprentice, a future naturalist, there was just one fact to quicken the pulse. That fact is the close similarity between chlorophyll and hemoglobin, the essence of our blood.

16 So that you may lay your hand upon the smooth flank of a beech and say, "We be of one blood, brother, thou and I."

17 The one significant difference in the two structural formulas is this: that the hub of every hemoglobin molecule is one atom of iron, while in chlorophyll it is one atom of magnesium.

18 Iron is strong and heavy, clamorous when struck, avid of oxygen and capable of corruption. It does not surprise us by its presence in our blood stream. Magnesium is a light, silvery, unresonant metal; its density is only one seventh that of iron, it has half of iron's molecular weight, and melts at half the temperature. It is rustless, ductile and pliant; it burns with a brilliant white light rich in actinic rays, and is widely distributed through the upper soil, but only, save at mineral springs, in dainty quantities. Yet the plant succeeds always in finding that mere trace that it needs, even when a chemist might fail to detect it.

19 How does the chlorophyll, green old alchemist that it is, transmute the dross of earth into living tissue? Its hand is swifter than the chemist's most sensitive analyses. In theory, the step from water and carbon dioxide to the formation of sugar (the first result readily discerned) must involve several syntheses; yet it goes on in a split hundredth of a second. One sunlight particle or photon strikes the chlorophyll, and instantaneously the terribly tenacious molecule of water, which we break down into its units of hydrogen and oxygen only with difficulty and expense, is torn apart; so too is the carbon dioxide molecule. Building blocks of the three elements, carbon, hydrogen and oxygen, are then whipped at lightning speed into carbonic acid; this is instantly changed over into formic acid—the same that smarts so in our nerve endings when an ant stings us. No sooner formed than formic acid becomes formaldehyde and hydrogen peroxide. This last is poisonous, but a ready enzyme in the plant probably splits it as fast as it is born into harmless water and oxygen, while the formaldehyde is knocked at top speed into a new pattern—and is grape sugar, glucose. And all before you can say Albert Einstein. Indeed, by the time you have said Theophrastus Bombastus Aureolus Paracelsus von Hohenheim,

the sugar may have lost a modicum of water—and turned into starch, the first product of photosynthesis that could be detected by the methods of fifty years ago.

20 At this very instant, with the sun delivering to its child the earth, in the bludgeoning language of mathematics, 215×10^{15} calories per second, photosynthesis is racing along wherever the leaf can reach the light. (All else goes to waste.) True, its efficiency is very low—averaging no better than one per cent, while our machines are delivering up to twenty-five per cent of the fuel they combust. But that which they burn—coal and gas, oils and wood—was made, once, by leaves in ancient geologic times. The store of such energy is strictly finite. Chlorophyll alone is hitched to what is, for earthly purposes, the infinite.

21 Light, in the latest theory, is not waves in a sea of ether, or a jet from a nozzle; it could be compared rather to machine gun fire, every photo-electric bullet of energy traveling in regular rhythm, at a speed that bridges the astronomical gap in eight minutes. As each bullet hits an electron of chlorophyll it sets it to vibrating, at its own rate, just as one tuning fork, when struck, will cause another to hum in the same pitch. A bullet strikes—and one electron is knocked galley west into a dervish dance like the madness of the atoms in the sun. The energy splits open chlorophyll molecules, recombines their atoms, and lies there, dormant, in foods.

22 The process seems miraculously adjusted. And yet, like most living processes, it is not perfect. The reaction time of chlorophyll is not geared as high as the arrival of the light-bullets. Light comes too fast; plants, which are the very children of light, can get too much of it. Exposure to the sunlight on the Mojave desert is something that not a plant in my garden, no, nor even the wiry brush in the chaparral, could endure. Lids against the light plants do not have; but by torsions of the stalk some leaves may turn their blades edge-on to dazzling radiation, and present them again broadside in failing light. Within others the chlorophyll granules too, bun or pellet-shaped as they are, can roll for a side or frontal exposure toward the light. In others they can crowd to the top of a cell and catch faint rays, or sink or flee to the sides to escape a searing blast. . . .

23 When I began to write these pages, before breakfast, the little fig tree outside my window was rejoicing in the early morning

light. It is a special familiar of my work, a young tree that has never yet borne fruit. It is but a little taller than I, has only two main branches and forty-three twigs, and the brave if not impressive sum of two hundred and sixteen leaves—I have touched every one with a counting finger. Though sparse, they are large, mitten-shaped, richly green with chlorophyll. I compute, by measuring the leaf and counting both sides, that my little tree has a leaf surface of about eighty-four square feet. This sun trap was at work today long before I.

24 Those uplifted hand-like leaves caught the first sky light. It was poor for the fig's purpose, but plant work begins from a nocturnal zero. When I came to my desk the sun was full upon those leaves—and it is a wondrous thing how they are disposed so that they do not shade each other. By the blazing California noon, labor in the leaves must have faltered from very excess of light; all the still golden afternoon it went on; now as the sun sets behind a sea fog the little fig slackens peacefully at its task.

25 Yet in the course of a day it has made sugar for immediate burning and energy release, put by a store of starch for future use; with the addition of nitrogen and other salts brought up in water from the roots it has built proteins too—the very bricks and mortar of the living protoplasm, and the perdurable stuff of permanent tissue. The annual growth ring in the wood of stem and twigs has widened an infinitesimal but a real degree. The fig is one day nearer to its coming of age, to flowering and fruiting. Then, still leafing out each spring, still toiling in the sunlight that I shall not be here to see, it may go on a century and more, growing eccentric, solidifying whimsies, becoming a friend to generations. It will be "the old fig" then. And at last it may give up the very exertion of bearing. It will lean tough elbows in the garden walks, and gardeners yet unborn will scold it and put up with it. But still it will leaf out till it dies.

26 Dusk is here now. So I switch on the lamp beside my desk. The powerhouse burns its hoarded tons of coal a week, and gives us this instant and most marvelous current. But that light is not new. It was hurled out of the sun two hundred million years ago, and was captured by the leaves of the Carboniferous tree-fern forests, fell with the falling plant, was buried, fossilized, dug up and resurrected. It is the same light. And, in my little fig tree as in the ancient

ferns, it is the same unchanging green stuff from age to age, passed without perceptible improvement from evolving plant to plant. What it is and does, so complex upon examination, lies about us tranquil and simple, with the simplicity of a miracle.

Discussion

1. How does Peattie establish the importance of his subject? Does this statement of the importance of chlorophyll establish the importance of your learning about the substance?
2. What kind of audience is the author writing for? Judge on the basis of the diction and the manner of presenting facts. Compare the essay in this respect with Fuller, "Photosynthesis," pp. 174–179.
3. Find two or more accounts of processes in the essay.
4. Why does Peattie introduce specific persons into his account?
5. How much work does the information in paragraph 23 represent? Do you like the author's having endowed the fig tree with personality in paragraph 25?
6. Write a fifty to seventy-five word epitome of the essay.
7. Study the sentence structure in paragraphs 1–3.
    a. How many of the sentences in these paragraphs are simple? How many are compound? How many complex?
    b. How many of the sentences vary the normal sentence order of subject, predicate, complement?
    c. How much variety is there in length?
    d. Find an example or two of the order of climax within a sentence.
    e. Do any of the sentences contain parenthetical elements?
8. Master the following words, examining their occurrence in the paragraphs indicated. How many of them are used objectively (for their denotations), and how many subjectively (for their connotations, their personal and emotional flavor)?

    proliferate, intricately (2); *proletariat* (3); *conduit* (4); *synthesize, resilient, photosynthesized* (5); *vital* (6); *opaque, viscous* (11); *ductile* (18); *photon, modicum* (19); *bludgeoning* (20); *torsions* (22); *whimsies* (25).
9. List ten words used primarily for the vivid feelings they convey.

10. List ten concrete nouns used to make ideas clearer and more effective.
11. What pun is involved in the first sentence of paragraph 8?
12. Find examples of metaphor in paragraph 2.

BERGEN EVANS • *Don't Monkey with the Platypus*

Suppose you tried to stop the average citizen, hurrying to his rendezvous with the tax collector, to inform him that "unless something is done"—i.e., unless more public money is spent—the ivory-billed woodpecker of Louisiana may become extinct. You would probably run a risk of becoming extinct yourself.

Yet the citizen has a stake in the woodpecker. Every year his taxes and every month his household bills are higher because of his indifference to the waste of natural resources, of which wild life is an inseparable part. Despite the illusions fostered by his parson and his haberdasher, the citizen is an animal. He is but a filament in the vast web of which the woodpecker is a part, and is far from knowing what strands may be snapped with impunity.

The arguments advanced to support the protection of vanishing species may be classified as mystical, intellectual, and practical The mystical argument, which regards all living things as ends in themselves, is more a statement of values than a presentation of evidence. Furthermore, it is not, as a position, invulnerable. All life must destroy other life to exist. Vegetarianism, to the biologist, is pure sophistry. And he would be a saintly figure indeed who, afflicted with hay fever, still maintained that ragweed has its rights.

The spectrum of the intellectual argument extends from the aesthetic to the practical, from "pure" to "applied" science, but it comes within the perceptions of the common man only in its lower ranges. Even he, however, has some glimmering of the de-

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— From *Harper's Magazine,* December, 1946. Reprinted by permission of *Harper's Magazine* and Bergen Evans.

lights of knowledge and can occasionally see that the extinction of a species is an irreparable loss. He must be a clod indeed whose heart does not leap up when he beholds a platypus in the zoo. This strange little creature with the bill and feet of a duck and the fur of a beaver, that lays eggs and yet suckles its young, is too preposterous to be anything but true. Unlike God, had it not existed no man would have dared to invent it. It is *the* missing link, complete with refutations. It is the doubter's delight, the bewilderment of bishops, a cosmic giggle. Yet it is rare and frail. It could be extirpated in a month. And once it was destroyed who would ever believe it once had been?

Consider the quagga. It was Lord Morton's crossing of a quagga with a chestnut mare that led Agassiz, Romanes, and Darwin to believe in telegony—the theory, still almost universally held, that offspring sometimes inherit characteristics from a previous mate of their dam. For three foals that the mare subsequently bore to a black Arabian stallion were all marked like quaggas. The theory, which if true would be of tremendous intellectual—and, of course, economic—importance, is now in complete disrepute among the learned, due largely to the work of Cossar Ewart. But we shall never know *for sure:* Lord Morton's experiment cannot be duplicated, to be confirmed or denied, for the quagga is extinct.

We are just at the beginning of knowledge and of nothing are we more ignorant and of nothing do we need more to be informed than of the ways of living things. Up until now zoology has been concerned almost exclusively with describing and classifying. That, of course, is an indispensable foundation, but the really valuable knowledge, the harvest of all this earlier work, the study of living processes and of animals in their environments is, for the most part, yet to come.

But before it comes the animals may go. While the scientist has been arranging his tools the hunter and the speculator, the scout, the sealer, the furrier, the lumberman, the farmer, the engineer, and John Proteus Citizen in a thousand capacities have come perilously close to putting an end to all investigation by destroying the creatures he intended to have a look at. Within the past seventy years more than a score of species of birds and animals have been exterminated in this country alone and more than three score others reduced to the point where it is a question if they can be saved.

It is incredible. No catastrophe since the beginning of life can come anywhere near it. Even Adam ate only the fruit of the tree of knowledge. We are devouring root and branches. From the Guadalupe rock wren to the California condor, from the White Mountain dwarf shrew to the Rocky Mountain grizzly, strange and wonderful forms of life are vanishing before we can know anything about them. The whalers have just about destroyed the whale. The milliners almost got the egret. The Elks have come very close to eliminating the elk. And the canned dog-food manufacturers are rapidly closing in on the last of the sea lions.

If the loss were merely one of laboratory specimens it might be hard in a hungry world to protest against it. But we are just beginning to perceive what immense material losses have been involved in this holocaust and what still more immense ones threaten in the very near future. Which brings us to the practical argument.

II

Agriculture, upon which all men are completely dependent, is a form of applied biology. It is a making use for man's benefit of the interrelations of living things. For plants do not just grow of themselves. They are an expression of the soil, the climate, the topography, the underlying formations, *and the animal life* of the regions in which they flourish. The pollinating bee, the aerating worm, and, above all, the putrefying bacteria are indispensable parts of the process of which the plant is only one manifestation.

No living thing exists in complete independence. Animals, like plants, are a part of their environment. They are manifestations of the climate, the vegetation, and of all other species within their habitat. You cannot, in the natural state, at least, separate a horse and grass; the grass supports the horse and the horse manures the grass. The elf-owl of Arizona lives solely in the abandoned nesting holes of a certain species of woodpecker. And this woodpecker makes its holes solely in the giant cactus. So that one many seriously wonder if there are three forms of life here or one. Certainly it is an academic abstraction to think of the owl apart from the cactus and the woodpecker. They are as much a part of it as its feathers.

These interrelationships are now perceived wherever we turn. Squirrels eat nuts and—although unintentionally—plant seedlings. Snowshoe hares girdle young trees and kill many of them; but in so doing they let air and light into the thick stands of seedlings, reduce fire hazards and check the spread of parasites. Bees live off flowers. Flowers live off bees. And so on.

Our fathers in the first despair of their new knowledge allowed themselves to put too simple an interpretation on Darwin's famous "struggle for existence." The robust saw natural selection as a sort of jolly scrimmage or field day with God, the Great Vicar, awarding the prizes of health and dominance. The more nervous saw Nature "red in tooth and claw" knocking down species like ninepins and crying that "all must go." Both seemed unaware of the fact that co-operation is as necessary to survival as competition, though Prince Kropotkin and a few others tried to call attention to this important fact.

Animals are now perceived to exist only as members of a biotic community and these communities are exceedingly complex. Professor Charles Elton has described for us the community centering around a species of yellow ant that lives in the limestone pastures on the lower slopes of the Malvern Hills. This ant and its pupae are much relished by woodpeckers who bore assiduously into its hummocks. When the woodpecker is sated and the ant's nest is in a state of confusion robber ants, which have been lying in wait, rush in to add to the depredations. Rabbits are fond of depositing their dung on these same hummocks and that, together with the soil which the ants have brought to the surface, forms a rich humus in which, in time, there grows a special set of plants. Prominent among these is wild thyme, which rabbits detest as food. To its flowers are attracted the red-tailed bumblebee and to its roots a particular species of moth. One could go on and on, for each plant and animal involved has a host of hangers-on, guests, and parasites. But enough has been said to indicate that the isolation of any species or individual is an arbitrary and "unnatural" procedure.

And each of these species, like the individuals which compose it, is simultaneously competing with and assisting other species, though there is probably no more affection in the assistance than malice in the competition.

The co-operation in nature is most plainly visible in true symbiosis. The crocodile bird picks the teeth of the crocodile and is spared the fatigue of foraging. The crocodile is possibly saved from caries and trench mouth. Even so necessary and intimate a function as digestion is sometimes a co-operative effort. Termites eat wood but they can't digest it; that is done for them by several species of flagellate protozoans in their intestines. The protozoans can digest wood, but they can't procure it; that is done for them by the termites. So that each is wholly dependent on the other and—one assumes—wholly unaware of the other's existence.

Elton illustrates this co-operation amid competition by saying that the individual cells of a deer's body are in competition for food yet they co-operate to produce a deer. Individual deer compete with each other, yet they combine to form a herd. Deer and mountain lions have different views of the purpose of venison, yet they keep each other going as species and combine to form a deer-lion community.

The layman who finds himself unable to perceive just what benefits the deer derive from their "co-operation" with the lions may comfort himself with the thought that until quite recently his inability was shared by almost all biologists and rangers and was, indeed, universal until in the early 1920's when the United States government was given an expensive lesson in ecology.

In 1906 a national game preserve had been established in the Kaibab forest, just north of the Grand Canyon. The deer in the forest were protected and in an excess of zeal the mountain lions, their "enemies," were as nearly as possible exterminated. Relieved of this restraining pressure on their numbers the deer multiplied to such an extent that they overate their food supply. They browsed the trees as high as they could reach; they ate the roots of the grass and destroyed the seedlings which should have furnished them more food. By 1920 they were starving and the Secretary of Agriculture, *to save the herd,* opened the forest to hunters and had the lions protected. He acted in time and the herd is again in vigorous health, though it is doubtful if the individual deer feels any gratitude whatever when attacked by a lion.

There are hundreds of similar instances of the consequences of man's interference with what used to be called "the balance of nature." Actually there is no "balance" in nature in the sense of a static equipoise; environments and the flora and fauna that coexist within them are continually changing. But they usually change slowly with a myriad local variations in kind and degree. Whereas man now has it in his power to introduce instantaneous and widespread changes whose consequences he cannot foresee or control.

Everyone knows that the introduction of the English sparrow into the United States and of the rabbit into Australia have been disasters of the first magnitude. Less publicized but equally serious, though in smaller areas, have been the introduction of the mongoose into the West Indies, the starling into New Zealand, the American muskrat into Europe, and the lantana into Hawaii. Scientists have sometimes countered by introducing still another species which preys upon the troublesome one. But it's a risky business. The remedy may prove worse than the disease. It has been proposed that coyotes be introduced into Australia to control the plague of rabbits, but no reputable scientist has yet been willing to assume the risk of introducing coyotes into a country whose economic strength lies in sheep raising. Ladybugs have been very successful in controlling plagues of aphids because the ladybugs eat nothing but aphids and once they've cleaned up an orchard just lie down and die. But all animals are not so obliging.

Sometimes man is merely an accessory to changes which some other animal happens to desire. For over two centuries now he has been caught in the middle of a titanic struggle between the brown rat and the black rat, now giving aid to the one side and now comfort to the other. All unwittingly, of course, and always under the delusion that he was controlling the situation. The decline in bubonic plague, which until recently was generally ascribed to improved sanitation, is now thought to have been, in a large part, due to the invasion and occupation of Europe by the brown or Norwegian rat soon after 1727. The plague, we know, is carried by lice which are carried by rats; and the black rat, which the brown rat displaced but did not completely exterminate, lived in closer contact with human beings than his successor who was content to inhabit sewers and cellars. With modern ratproofing of basements the brown rat is being more and more excluded from our buildings but, as Mr. A. C. Hinton points out, the open skylights of top floors and the network of wires and cables that bridge city streets have created "an approach to paradise" for the black rat which, freed by our efforts from the menace of his foe, is increasing dangerously. So much so, indeed, that Mr. Hinton is of the opinion that it is not our sanitation but our habit of moving out of the warehouse and wholesale districts at night that is protecting us from the plague.

III

Man's power to exterminate other living things has grown tremendously within the past few years, great as it was before, and if this power is used without knowledge it may have the most dreadful consequences. If, for example, it lay within the power of some suburbanite, exasperated by worm casts on his carefully-tended lawn, to end all worms by a wave of his hand, he would probably wave his hand. But in so doing he would also be ending all suburbanites, for the working of the soil by earthworms is one of the bases of life.

The possible consequences of the reckless use of some of the powerful new insecticides developed during the war is a matter of the gravest concern. A few limited experiments have suggested that it would be quite possible to start a chain reaction of disasters with them. Thus the use, in insect control work in Utah, of sweetened poisoned bran, intended for grasshoppers, was believed to have killed perhaps half the honey bees in the state; which, in turn, damaged the orchards by reducing the pollination of fruit trees and impoverished the soil by lessening the production of clover and other legumes.

Man's unawareness of his place in his own biotic community in no way changes the fact that he *is* a member of such a community and as subject to its interrelations as the steer he eats or the mosquito that eats him. Darwin once said humorously that he could estimate the marriage rate in a village by the condition of the clover in the surrounding fields. For old maids, he said, keep cats and cats kill mice and mice kill bumblebees and bumblebees fertilize clover.

It doesn't matter, of course, what our motives are in making these changes. Nature is not interested in motives. The rabbit was introduced into Australia to aid sheep farming by competing with the kangaroo and has come close to making sheep farming impossible by competing with sheep.

Even man himself, sometimes, gets into strange and delicately-poised relations with his physical environment and suffers unexpected calamities as a result of changes that seemed harmless or even beneficial. A grim and curious example is furnished by the increase of infant mortality among the Nauru Islanders when prohibition was forced upon them by Australia, to whom they had been mandated. Investigation revealed that the children were dying of a deficiency of vitamin B_1, an adequate supply of which they had previously been receiving from breast milk so long as their mothers had remained saturated with a yeasty home brew made from palm leaves. When the toddy was taken from the mothers, half the babies died. When, as a result of the investigation, it was allowed again, infant mortality fell to seven per cent.

Such instances, and scores of others, do not mean that we should never attempt to change an established situation. But it does mean that we had better inform ourselves as fully as possible before introducing any sweeping changes.

And on nothing do the people of the United States need more to be informed than of the present state of their common wealth and of the need for a wiser management of it than they have recently shown.

Our greatness as a nation and our well-being as individuals are largely due to our natural resources and both are seriously endangered by the prodigal and ignorant course that we have pursued for the past three generations. Four-fifths of our forests have been cut down, three-fourths of our grasslands grazed to stubble, and almost a third of our arable land eroded or otherwise reduced to barrenness. The denuded watersheds have become spillways. The rivers, sterile with pollution, alternate from foul trickles to devastating floods. Our minerals are dwindling; we import much of which it was assumed a generation ago we had an unlimited supply. The very water is disappearing. In the Santa Clara valley the water table sank one hundred feet between 1910 and 1930, and the Santa Clara valley is only an extreme example of what is happening in Nebraska and Illinois and Ohio and a hundred other places. More than a million farms have been abandoned. (Less than half of the area of the United States has yet been mapped; we are wearing the country out before we have looked it over!)

And none of our natural resources has been more recklessly destroyed than our wild life. In fact, the very use of the term "resource" in this connection will most likely seem an extravagance to the urbanite who conceives of wild life as something to show the children at the zoo.

Yet hunting and fishing and trapping once furnished a large part of the nation's food and clothing and, in the aggregate, probably produced more wealth and found a livelihood for more men than many of our major mineral resources have done. Nor has their decline meant a corresponding increase elsewhere. There has been no compensation for the barrenness of our marshes and streams and hedgerows and forest edges. The farmer has become a sharecropper and the fisherman a caddy and we are all the poorer.

In regard to wild life we are at a crisis. Studies have shown that with most species there is a point of depletion below which restoration is unlikely. Several species have become extinct, after reaching such a point, despite everything that could be done to save them. At one time when the fight to save the heath hen was being waged there was a warden for every single known member of the species. But it was too late. The heath hen disappeared in 1927. At this moment perhaps a dozen other species may be in the same predicament—among them the trumpeter swan, the whooping crane, the ivory-billed woodpecker and, perhaps, the right whale. No one can be sure that, despite every possible protection and encouragement—which they are yet to receive—there are enough individuals left to maintain these species.

On the other hand, life has shown itself to be a force of explosive intensity and several species which were once almost extinct, such as the buffalo and the Alaska fur seal, have, under fortunate circumstances and good management, come back to the point of being definite economic assets. And there is reason to believe that many more species can be revived and put on a paying basis, can be harvested with profit, that is, just like alfalfa or corn.

That does not mean merely that the farmer will have a greater diversity of crops and the hunter and fisherman larger catches. It means that the land upon which we live will be richer and life more pleasurable. It means that we will be living off interest instead of principal and hence will be more secure.

But it cannot be accomplished by mere re-stocking or the extension of closed seasons. "In its broadest aspects," says one of the most serious students of the problem, "conservation of the organic resources means restoring to the highest possible level and maintaining in a state of high productivity those resources, including wild life, that can be used on a crop basis to sustain human society." Soil, water, forest, and wild life preservation are inseparable parts of one program. As best we can, we have to repair *all* the damage we have done. There is no use re-stocking a stream with fish unless the waters of the stream are purified and freed from silt so that the fish can live in it. And that means reforestation, erosion control, and the regulation of commerce. Shorter hunting seasons and increased restrictions may prolong the extinction of the ducks, but only the restoration of marshes and water refuge areas on the breeding grounds and along the flyways will make it possible for the birds that remain to become again the flocks they were thirty years ago. About seven million acres is the estimated minimum requirement, by the way, of which less than half has so far been provided. It will also require still more "regimentation," for the farmers whose fields border upon the breeding ponds must not burn them over before the ducklings have left the nests. It, and other forms of wild life conservation, will even require nations to get together, for animals know nothing of national boundaries and birds, in particular, move across hemispheres.

The next twenty years may see the difference between desolation and restoration. Fortunately there is a group of public servants —the members of the National Resources Board, the soil erosion, forestry, and fish and wild life services—awake to the danger and trained to meet it. A Bureau of Conservation has been proposed, and there has been a dispute as to whether it should be in the Department of Agriculture or the Department of the Interior. It would be more suitable to the gravity of the situation if there were a Department of Conservation with Agriculture, the Interior, Commerce and a part of State, Navy, and the Army under *it*. The trained experts of the government are assisted by a number of public-spirited private groups, such as the Audubon Societies and the National Grange, who are aware of at least a part of the danger and are in sympathy with at least a part of the program. But the great majority of us are ignorant and indifferent.

The conservation program is an expensive one. It will cost billions. But doing nothing will cost more. We have behaved like the Kaibab deer and endangered the basis of our subsistence. Perhaps some beneficent spirit will send a wasting pestilence so that the gutted land can have restorative eons for the earthworm, the bacteria, and the wind and the rain to get things in shape for us again. Or perhaps we will sink from frustration into anarchy and from anarchy into oblivion. Other nations have flourished and disappeared. Other species have ruled and vanished.

There still remains, however, the possibility—and the chance —to act intelligently in our own interest.

Discussion

1. Discuss the article as an argument. What are the points and how are they established? Is the argument inductive or deductive?
2. Find a passage which is a good example of cause and effect reasoning.
3. Does the author resort to sarcasm or "telling phrases" in his argument? Does this weaken or strengthen his argument —that is, does sarcasm sometimes seem a substitute for facts and reasoning? Does the author appear to forget, or not to need, striking phrases in the last half of the article?

Writing

Write a theme dealing wtih some aspect of conservation. Base it on both your reading and your experience. The following suggestions may help you choose a topic: Conservation and the sportsmen's club; The introduction of pests (such as the English sparrow); The giant African snail; Multiflora roses as cover for small game; A particular bird, animal, or fish under protection; The last of some species.

LUDLOW GRISCOM · *The Passing of the Passenger Pigeon*

We live in an era in which birds are "protected" legally throughout the country, and more and more people are becoming conservation-minded. Many of them may not remember the early years of the century, when utterly different conditions prevailed. In those days a substantial class of commercial hunters made a living by killing or capturing a large variety of birds for sport, food, the millinery trade, and other purposes. Large birds were regarded as natural targets by hunters and vacation tourists; small boys learned to shoot by practicing on the robins and other song birds on the parental lawn; and desperately poor, lower-class immigrants eked out a miserable living by means of blackbird pies and young night heron stews. The result was the extinction of several birds and the decimation of bounteous wild-life resources. Nearly one hundred species were either close to extinction or at least "vanishing."

Thoughtful people who deplored these things initiated a campaign of protection. Popular education and sentimental appeals roused a supine public and forced the passage of a long series of state and national laws. One of the earlier premises was that the decrease of various birds was primarily due to slaughter by human beings. The extinction of the passenger pigeon was widely used as an illustration. We now know that this premise is correct only in part. Certain adequately protected birds have continued to decrease just the same. It transpires that survival or extinction usually depends upon several or a complicated series of factors. Each living species of animal, and the total number of individuals composing it, represent ages of evolution, a perfectly adjusted balance between favorable and unfavorable factors. Most birds are adaptable to changing conditions; a very few are so specialized that the sudden arrival of *new* or *additional* unfavorable factors insures their doom.

—From *The American Scholar*, Spring, 1946. Reprinted by permission of Dr. Ludlow Griscom and *The American Scholar*.

The passenger pigeon furnishes an ideal example for several reasons. No other bird on earth in the human era has existed in such spectacular multitudes, in which respect it rivalled the insect world. One might consequently suppose that it would be the last bird to become extinct, even though the known statistics of its mass slaughter for commercial purposes are equally prodigious. Finally, the details of its life history are sufficiently well known so that we can state with some assurance that it had a long list of biological "defects" or "specializations," every one of them potentially dangerous to any bird possessing them.

In the early decades of the last century the wild pigeon existed in enormous flocks that wandered over the country from winter roosts to summer nesting areas, the chief factor being an adequate food supply. These flocks were one of the great wonders of the natural world. During migration the birds flew with great swiftness (forty to sixty miles per hour) in a front about a mile wide. There were countless flocks *200–300 miles long,* which took all day to pass a given point. The sun was obscured as by an eclipse, the air reeked with "pigeon smell," and the roar of wings could be heard from four to six miles away. Wilson estimated that such a flock required at least seventeen million bushels of acorns and nuts per day. The largest flock on record was noted by Audubon in 1813, in Kentucky. He happened to leave Henderson one autumn day as a great flight began. He reached Louisville, 55 miles away, by sunset. During all this time the pigeons were passing in undiminished numbers. This flight lasted for *three days.* Audubon assumed that the flock averaged a mile wide, that the pigeons flew at the rate of a mile a minute, and that there were two pigeons to the square yard. This worked out to 1,115,000,000 pigeons every three hours!

The winter and nesting roosts were scenes of indescribable uproar and confusion. As new flocks arrived and attempted to alight in already crowded trees, limbs gave way with a crash, killing hundreds of birds or precipitating nests, eggs and squabs to the ground. Every beast and bird of prey of the continent gathered to feast on the dead and dying. The forest would be killed outright by the square mile, and the ground become white with excrement. Each pigeon laid only one egg, rarely two, and the nest was so flimsy that it readily collapsed.

Used to prodigious mortality under primeval conditions, wild pigeons kept right on doing what they had once begun. They continued to arrive at a nesting forest even if it was set on fire. On migration they followed the leaders into a fog, into a blizzard. If the line of flight just cleared a hill top, all people had to do was to stand there waving poles, until they had killed as many as they chose. Blind instinct appears to have driven them like a swarm of locusts or army ants on the march.

Passenger pigeons were delicious eating and constituted a natural and normal food supply for the Indians and the earliest colonists. In the nineteenth century, the big city markets were insatiable. Even in the late seventies, New York could absorb one hundred barrels a day for weeks, without a break in the price. Each barrel contained from forty to fifty-five dozen birds. By 1860 there were 400–1000 "pigeoners" or netters, who pursued the great flocks from state to state, throughout the year, aided by the new railroads and telegraph lines. In the early seventies, one such flock was subjected to three "killings" in one year. It nested in Missouri in April, then flew to Michigan, and finally in July tried to nest again in Ulster County, New York.

The last great nesting (and the last great "killing") in history was near Petoskey, Michigan, in 1878. The nesting area was forty miles long by three to ten miles wide and covered 100,000 acres, while the feeding area was much greater than this. Over 300 *tons* of pigeons were sent to various city markets! The wild pigeon had already virtually disappeared from the Atlantic states; after this, it rapidly decreased in the interior. For reasons which we shall never exactly know, smaller groups of pigeons apparently never nested successfully, and the bird seemed incapable of overcoming its prodigiously developed gregarious instinct.

Let us now attempt a summary of the factors involved in the extinction of the passenger pigeon. More rashly, perhaps, I shall attempt to arrange them in an order of approximate importance. A generation ago it was universally held that large-scale slaughter by man for commercial purposes was primarily responsible. I fear this is unsound biology.

1. The primary cause for the passing of the passenger pigeon was its own specialized habits and a long list of biological "defects." Its low egg-laying capacity, flimsy nest, and herd instinct in migra-

tion are three minor ones. Its spectacular gregariousness was disastrous in two respects. The huge flocks could not be overlooked by the bird's enemies, and no effort was made to avoid them. In a primeval wilderness their ravages were overcome by sheer weight of numbers. Every nesting automatically involved an appalling mortality of adults and young and a waste of eggs, caused by the habits of the bird itself. The final "defect" of this pigeon was its inability to learn anything new; it could not change its habits to meet the pressure of new and unfavorable conditions or dangers.

2. It follows from the above that a primeval wilderness was a prerequisite for survival. There would have had to be thousands of unbroken square miles of beech and oak forest in a nesting reservation, and another equally great winter roosting area, for one flock of passenger pigeons to have been conserved for posterity. It has never been sufficiently emphasized that the inevitable advances of human civilization which involved the destruction of the primeval forests, would have proved fatal to this pigeon, even if its flesh had been rank, unpalatable and of no commercial value.

3. The outrageous slaughter of pigeons by skilled professionals from 1860 on merely hastened their inevitable doom. Unfortunately, it was just as easy to kill the last birds in the 1890's as it was for the Pilgrims to kill the first 250 years earlier. In this stretch of time the passenger pigeon had learned nothing, evolved no defensive adaptation.

Warrant for these judgments may be found by comparison with other North American birds. Civilization destroyed the northern forests without endangering a single other species; only three or four were seriously reduced in numbers. Other birds, too, had the habit of nesting in great colonies or rookeries, and this habit is fatal in settled districts. These birds gradually learned to abandon it. The night heron is an outstanding example. Formerly all the night herons in the northeast nested in four to six great rookeries, which could not escape detection and persecution. There were three in eastern Massachusetts. Today, an army of one hundred observers would not suffice to locate in one season all the scattered pairs and groups in this state. The net result is that a large and conspicuous bird is more abundant and widely distributed than ever before.

The canvasback duck was mercilessly hunted by skilled professionals from 1860 to 1910, while a fair percentage of its southern breeding range was destroyed, as advancing civilization drained the prairie sloughs and lakes. Moreover, in prehistoric times the total maximum number of canvasbacks in existence could hardly have equalled the multitudes in one flock of passenger pigeons. While admittedly greatly reduced in numbers, the canvasback was never in danger of extinction. Why? First and foremost, the genius of man simply could not kill it in sufficiently large numbers, try as hard as he would. The canvasback at once became shy, wary, and "clever." No matter what new device for its destruction was thought up, an adequate number of these ducks learned to avoid it in one season. Moreover, the canvasback was remarkably prolific, and did not require an uninhabited wilderness in which to nest. Finally, a large number of pairs could nest in the rushes of a favorable lake without killing each other and destroying each other's eggs. Who can deny that these "assets" helped this bird to survive outrageous persecution?

In every known case of extinction, man has been to blame in one way or another. In no known case has man been solely to blame. Nature is cold, ruthless and impersonal. Biologically speaking, "Nothing succeeds like success." Mankind himself had better not forget it.

Discussion

1. Discuss the steps by which the author refutes the "earlier premise that the decrease of various birds was primarily due to slaughter by human beings," with the extinction of the passenger pigeon as an illustration.
2. Does the author present any facts not previously known? if not, is he still original?
3. What is the reason for the last sentence?
4. What is the scope of this article as compared with that of "Don't Monkey with the Platypus," pp. 226–236?

THOMAS HENRY HUXLEY · *The Method of Scientific Investigation*

The method of scientific investigation is nothing but the expression of the necessary mode of working of the human mind. It is simply the mode by which all phenomena are reasoned about, rendered precise and exact. There is no more difference, but there is just the same kind of difference, between the mental operations of a man of science and those of an ordinary person, as there is between the operations and methods of a baker or of a butcher weighing out his goods in common scales, and the operations of a chemist in performing a difficult and complex analysis by means of his balance and finely graduated weights. It is not that the action of the scales in the one case, and the balance in the other, differ in the principles of their construction or manner of working; but the beam of one is set on an infinitely finer axis than the other, and of course turns by the addition of a much smaller weight.

You will understand this better, perhaps, if I give you some familiar example. You have all heard it repeated, I dare say, that men of science work by means of induction and deduction, and that by the help of these operations, they, in a sort of sense, wring from Nature certain other things, which are called natural laws, and causes, and that out of these, by some cunning skill of their own, they build up hypotheses and theories. And it is imagined by many, that the operations of the common mind can be by no means compared with these processes, and that they have to be acquired by a sort of special apprenticeship to the craft. To hear all these large words, you would think that the mind of a man of science must be constituted differently from that of his fellow men; but if you will not be frightened by terms, you will discover that you are quite wrong, and that all these terrible apparatuses are being used by yourselves every day and every hour of your lives.

There is a well-known incident in one of Molière's plays,

— From the third lecture in "On Our Knowledge of the Causes of the Phenomena of Organic Nature" (1863), as reprinted in *Darwiniana,* 1896.

where the author makes the hero express unbounded delight on being told that he had been talking prose during the whole of his life. In the same way, I trust that you will take comfort, and be delighted with yourselves, on the discovery that you have been acting on the principles of inductive and deductive philosophy during the same period. Probably there is not one here who has not in the course of the day had occasion to set in motion a complex train of reasoning, of the very same kind, though differing of course in degree, as that which a scientific man goes through in tracing the causes of natural phenomena.

A very trivial circumstance will serve to exemplify this. Suppose you go into a fruiterer's shop, wanting an apple—you take up one, and, on biting it, you find it sour; you look at it, and see that it is hard and green. You take up another one, and that too is hard, green, and sour. The shopman offers you a third; but, before biting it, you examine it, and find that it is hard and green, and you immediately say that you will not have it, as it must be sour, like those that you have already tried.

Nothing can be more simple than that, you think; but if you will take the trouble to analyse and trace out into its logical elements what has been done by the mind, you will be greatly surprised. In the first place you have performed the operation of induction. You found that, in two experiences, hardness and greenness in apples went together with sourness. It was so in the first case, and it was confirmed by the second. True, it is a very small basis, but still it is enough to make an induction from; you generalise the facts, and you expect to find sourness in apples where you get hardness and greenness. You found upon that a general law that all hard and green apples are sour; and that, so far as it goes, is a perfect induction. Well, having got your natural law in this way, when you are offered another apple which you find is hard and green, you say, "All hard and green apples are sour; this apple is hard and green; therefore this apple is sour." That train of reasoning is what logicians call a syllogism, and has all its various parts and terms—its major premise, its minor premise, and its conclusion. And, by the help of further reasoning, which, if drawn out, would have to be exhibited in two or three other syllogisms, you arrive at your final determination, "I will not have that apple." So that, you see, you have, in the first place, established a law by induction, and upon that you have founded a deduction, and reasoned out the special particular case. Well now, suppose, having got your law, that at some time afterwards you are discussing the qualities of apples with a friend: you will say to him, "It is a very curious thing —but I find that all hard and green apples are sour!" Your friend says to you, "But how do you know that?" You at once reply, "Oh, because I have tried them over and over again, and have always found them to be so." Well, if we were talking science instead of common sense, we should call that an experimental verification. And, if still opposed, you go further, and say, "I have heard from the people in Somersetshire and Devonshire, where a large number of apples are grown, that they have observed the same thing. It is also found to be the case in Normandy, and in North America. In short, I find it to be the universal experience of mankind wherever attention has been directed to the subject." Whereupon, your friend, unless he is a very unreasonable man, agrees with you, and is convinced that you are quite right in the conclusion you have drawn. He believes, although perhaps he does not know he believes it, that the more extensive verifications are—that the more frequently experiments have been made, and results of the same kind arrived at—that the more varied the conditions under which the same results are attained, the more certain is the ultimate conclusion, and he disputes the question no further. He sees that the experiment has been tried under all sorts of conditions, as to time, place, and people, with the same result; and he says with you, therefore, that the law you have laid down must be a good one, and he must believe it.

In science we do the same thing—the philosopher exercises precisely the same faculties, though in a much more delicate manner. In scientific inquiry it becomes a matter of duty to expose a supposed law to every possible kind of verification, and to take care, moreover, that this is done intentionally, and not left to a mere accident, as in the case of the apples. And in science, as in common life, our confidence in a law is in exact proportion to the absence of variation in the result of our experimental verifications. For instance, if you let go your grasp of an article you may have in your hand, it will immediately fall to the ground. That is a very common verification of one of the best established laws of nature—that of gravitation. The method by which men of science establish the existence of that law is exactly the same as that by which we have established the trivial proposition about the sourness of hard and green apples. But we believe it in such an extensive, thorough, and unhesitating manner because the universal experience of mankind verifies it, and we can verify it ourselves at any time; and that is the strongest possible foundation on which any natural law can rest.

So much, then, by way of proof that the method of establishing laws in science is exactly the same as that pursued in common life. Let us now turn to another matter (though really it is but another phase of the same question), and that is, the method by which, from the relations of certain phenomena, we prove that some stand in the position of causes towards the others.

I want to put the case clearly before you, and I will therefore show you what I mean by another familiar example. I will suppose that one of you, on coming down in the morning to the parlour of your house, finds that a tea-pot and some spoons which had been left in the room on the previous evening are gone—the window is open, and you observe the mark of a dirty hand on the window-frame, and perhaps, in addition to that, you notice the impress of a hob-nailed shoe on the gravel outside. All these phenomena have struck your attention instantly, and before two seconds have passed you say, "Oh, somebody has broken open the window, entered the room, and run off with the spoons and the tea-pot!" That speech is out of your mouth in a moment. And you will probably add, "I know there has; I am quite sure of it!" You mean to say exactly what you know; but in reality you are giving expression to what is, in all essential particulars, an hypothesis. You do not *know* it at all; it is nothing but an hypothesis rapidly framed in your own mind. And it is an hypothesis founded on a long train of inductions and deductions.

What are those inductions and deductions, and how have you got at this hypothesis? You have observed in the first place that the window is open; but by a train of reasoning involving many inductions and deductions, you have probably arrived long before at the general law—and a very good one it is—that windows do not open of themselves; and you therefore conclude that something has opened the window. A second general law that you have arrived at in the same way is, that tea-pots and spoons do not go out of a window spontaneously, and you are satisfied that, as they are not now where you left them, they have been removed. In the third place, you look at the marks on the window-sill, and the shoemarks outside, and you say that in all previous experience the former kind of mark has never been produced by anything else but the hand of a human being; and the same experience shows that no other animal but man at present wears shoes with hob-nails in them such as would produce the marks in the gravel. I do not know, even if we could discover any of those "missing links" that are talked about, that they would help us to any other conclusion! At any rate the law which states our present experience is strong enough for my present purpose. You next reach the conclusion that, as these kinds of marks have not been left by any other animal than men, or are liable to be formed in any other way than by a man's hand and shoe, the marks in question have been formed by a man in that way. You have, further, a general law, founded on observation and experience—and that, too, is, I am sorry to say, a very universal and unimpeachable one—that some men are thieves; and you assume at once from all these premises—and that is what constitutes your hypothesis—that the man who made the marks outside and on the window-sill, opened the window, got into the room, and stole your tea-pot and spoons. You have now arrived at a *vera causa;* [1] you have assumed a cause which, it is plain, is competent to produce all the phenomena you have observed. You can explain all these phenomena only by the hypothesis of a thief. But that is a hypothetical conclusion, of the justice of which you have no absolute proof at all; it is only rendered highly probable by a series of inductive and deductive reasonings.

I suppose your first action, assuming that you are a man of ordinary common sense, and that you have established this hypothesis to your own satisfaction, will very likely be to go off for the police, and set them on the track of the burglar, with the view to the recovery of your property. But just as you are starting with this object, some person comes in, and on learning what you are about, says, "My good friend, you are going on a great deal too fast. How do you know that the man who really made the marks took the spoons? It might have been a monkey that took them, and the man may have merely looked in afterwards." You would probably reply,

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[1] True cause. [Editors' note.]

"Well, that is all very well, but you see it is contrary to all experience of the way tea-pots and spoons are abstracted; so that, at any rate, your hypothesis is less probable than mine." While you are talking the thing over in this way, another friend arrives, one of that good kind of people that I was talking of a little while ago. And he might say, "Oh, my dear sir, you are certainly going on a great deal too fast. You are most presumptuous. You admit that all these occurrences took place when you were fast asleep, at a time when you could not possibly have known anything about what was taking place. How do you know that the laws of Nature are not suspended during the night? It may be that there has been some kind of supernatural interference in this case." In point of fact, he declares that your hypothesis is one of which you cannot at all demonstrate the truth, and that you are by no means sure that the laws of Nature are the same when you are asleep as when you are awake.

Well, now, you cannot at the moment answer that kind of reasoning. You feel that your worthy friend has you somewhat at a disadvantage. You will feel perfectly convinced in your own mind, however, that you are quite right, and you say to him, "My good friend, I can only be guided by the natural probabilities of the case, and if you will be kind enough to stand aside and permit me to pass, I will go and fetch the police." Well, we will suppose that your journey is successful, and that by good luck you meet with a policeman; that eventually the burglar is found with your property on his person, and the marks correspond to his hand and to his boots. Probably any jury would consider those facts a very good experimental verification of your hypothesis, touching the cause of the abnormal phenomena observed in your parlour, and would act accordingly.

Now, in this supposititious case, I have taken phenomena of a very common kind, in order that you might see what are the different steps in an ordinary process of reasoning, if you will only take the trouble to analyse it carefully. All the operations I have described, you will see, are involved in the mind of any man of sense in leading him to a conclusion as to the course he should take in order to make good a robbery and punish the offender. I say that you are led, in that case, to your conclusion by exactly the same train of reasoning as that which a man of science pursues when he is endeavouring to discover the origin and laws of the most occult phenomena. The process is, and always must be, the same; and precisely the same mode of reasoning was employed by Newton and Laplace in their endeavours to discover and define the causes of the movements of the heavenly bodies, as you, with your own common sense, would employ to detect a burglar. The only difference is that, the nature of the inquiry being more abstruse, every step has to be most carefully watched, so that there may not be a single crack or flaw in your hypothesis. A flaw or crack in many of the hypotheses of daily life may be of little or no moment as affecting the general correctness of the conclusions at which we may arrive; but, in a scientific inquiry, a fallacy, great or small, is always of importance, and is sure to be in the long run constantly productive of mischievous if not fatal results.

Do not allow yourselves to be misled by the common notion that an hypothesis is untrustworthy simply because it is an hypothesis. It is often urged, in respect to some scientific conclusion, that, after all, it is only an hypothesis. But what more have we to guide us in nine-tenths of the most important affairs of daily life than hypotheses, and often very ill-based ones? So that in science, where the evidence of an hypothesis is subjected to the most rigid examination, we may rightly pursue the same course. You may have hypotheses, and hypotheses. A man may say, if he likes, that the moon is made of green cheese: that is an hypothesis. But another man, who has devoted a great deal of time and attention to the subject, and availed himself of the most powerful telescopes and the results of the observations of others, declares that in his opinion it is probably composed of materials very similar to those of which our own earth is made up: and that is also only an hypothesis. But I need not tell you that there is an enormous difference in the value of the two hypotheses. That one which is based on sound scientific knowledge is sure to have a corresponding value; and that which is a mere, hasty, random guess is likely to have but little value. Every great step in our progress in discovering causes has been made in exactly the same way as that which I have detailed to you. A person observing the occurrence of certain facts and phenomena asks, naturally enough, what process, what kind of operation known to occur in Nature, applied to the particular case, will unravel and explain the mystery? Hence you have the scientific hypothesis; and its value will be proportionate to the care and completeness with which its basis had been tested and verified. It is in these matters as in the commonest affairs of practical life: the guess of the fool will be folly, while the guess of the wise man will contain wisdom. In all cases, you see that the value of the result depends on the patience and faithfulness with which the investigator applies to his hypothesis every possible kind of verification.

Discussion

1. What qualities of the essay have made it a classic explanation—for the layman—of the scientific method?
2. Does Huxley expect the reader to take the account as a complete and thorough presentation of the subject? Explain your answer.
3. What are the key words in the selection?
4. Make a brief outline of the selection.
5. What is the function of paragraph 7, beginning "So much, then, by way of proof?"
6. Locate the topic sentence in paragraph 12, beginning "Now in this suppositious case . . ."
7. How many concrete words appear in the last paragraph? How do they help to make the idea clear?
8. Find an analogy and explain why it is used.

THOMAS HENRY HUXLEY · *A Lobster*

1 I have before me a lobster. When I examine it, what appears to be the most striking character it presents? Why, I observe that this part which we call the tail of the lobster, is made up of six distinct hard rings and a seventh terminal piece. If I separate one of the middle rings, say the third, I find it carries upon its under surface a pair of limbs or appendages, each of which consists of a stalk and two terminal pieces.

2 If I now take the fourth ring, I find it has the same structure, and so have the fifth and the second; so that, in each of these

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— From "A Lobster; or, The Study of Zoology" (1861); text from *Discourses Biological and Geological*, 1896.

divisions of the tail, I find parts which correspond with one another, a ring and two appendages; and in each appendage a stalk and two end pieces. These corresponding parts are called, in the technical language of anatomy, "homologous parts." The ring of the third division is the "homologue" of the ring of the fifth, the appendage of the former is the homologue of the appendage of the latter. And, as each division exhibits corresponding parts in corresponding places, we say that all the divisions are constructed upon the same plan. But now let us consider the sixth division. It is similar to, and yet different from, the others. The ring is essentially the same as in the other divisions; but the appendages look at first as if they were very different; and yet when we regard them closely, what do we find? A stalk and two terminal divisions, exactly as in the others, but the stalk is very short and very thick, the terminal divisions are very broad and flat, and one of them is divided into two pieces.

3 I may say, therefore, that the sixth segment is like the others in plan, but that it is modified in its detail.

4 The first segment is like the others, so far as its ring is concerned, and though its appendages differ from any of those yet examined in the simplicity of their structure, parts corresponding with the stem and one of the divisions of the appendages of the other segments can be readily discerned in them.

5 Thus it appears that the lobster's tail is composed of a series of segments which are fundamentally similar, though each presents peculiar modifications of the plan common to all. But when I turn to the forepart of the body I see, at first, nothing but a great shield-like shell, called technically the "carapace," ending in front in a sharp spine on either side of which are the curious compound eyes, set upon the ends of stout movable stalks. Behind these, on the under side of the body, are two pairs of long feelers, or antennae, followed by six pairs of jaws folded against one another over the mouth, and five pairs of legs, the foremost of these being the great pinchers, or claws, of the lobster.

6 It looks, at first, a little hopeless to attempt to find in this complex mass a series of rings, each with its pair of appendages, such as I have shown you in the abdomen, and yet it is not difficult to demonstrate their existence. Strip off the legs, and you will find that each pair is attached to a very definite segment of the under wall of the body; but these segments, instead of being the lower

parts of free rings, as in the tail, are such parts of rings which are all solidly united and bound together; and the like is true of the jaws, the feelers, and the eye-stalks, every pair of which is borne upon its own special segment. Thus the conclusion is gradually forced upon us, that the body of the lobster is composed of as many rings as there are pairs of appendages, namely, twenty in all, but that the six hindmost rings remain free and movable, while the fourteen front rings become firmly soldered together, their backs forming one continuous shield—the carapace.

7 Unity of plan, diversity in execution, is the lesson taught by the study of the rings of the body, and the same instruction is given still more emphatically by the appendages. If I examine the outermost jaw I find it consists of three distinct portions, an inner, a middle, and an outer, mounted upon a common stem; and if I compare this jaw with the legs behind it, or the jaws in front of it, I find it quite easy to see, that, in the legs, it is the part of the appendage which corresponds with the inner division, which becomes modified into what we know familiarly as the "leg," while the middle division disappears, and the outer division is hidden under the carapace. Nor is it more difficult to discern that, in the appendages of the tail, the middle division appears again and the outer vanishes; while, on the other hand, in the foremost jaw, the so-called mandible, the inner division only is left; and, in the same way, the parts of the feelers and of the eye-stalks can be identified with those of the legs and jaws.

8 But whither does all this tend? To the very remarkable conclusion that a unity of plan, of the same kind as that discoverable in the tail or abdomen of the lobster, pervades the whole organization of its skeleton, so that I can return to the diagram representing any one of the rings of the tail and by adding a third division to each appendage, I can use it as a sort of scheme or plan of any ring of the body. I can give names to all the parts of that figure, and then if I take any segment of the body of the lobster, I can point out to you exactly, what modification the general plan has undergone in that particular segment; what part has remained movable, and what has become fixed to another; what has been excessively developed and metamorphosed and what has been suppressed.

9 But I imagine I hear the question, How is all this to be tested? No doubt it is a pretty and ingenious way of looking at the

structure of any animal; but is it anything more? Does Nature acknowledge, in any deeper way, this unity of plan we seem to trace?

10 The objection suggested by these questions is a very valid and important one, and morphology was in an unsound state so long as it rested upon the mere perception of the analogies which obtain between fully formed parts. The unchecked ingenuity of speculative anatomists proved itself fully competent to spin any number of contradictory hypotheses out of the same facts, and endless morphological dreams threatened to supplant scientific theory.

11 Happily, however, there is a criterion of morphological truth, and a sure test of all homologies. Our lobster has not always been what we see it; it was once an egg, a semifluid mass of yolk, not so big as a pin's head, contained in a transparent membrane, and exhibiting not the least trace of any one of those organs, the multiplicity and complexity of which, in the adult, are so surprising. After a time, a delicate patch of cellular membrane appeared upon one face of this yolk, and that patch was the foundation of the whole creature, the clay out of which it would be moulded. Gradually investing the yolk, it became subdivided by transverse constrictions into segments, the forerunners of the rings of the body. Upon the ventral surface of each of the rings thus sketched out, a pair of bud-like prominences made their appearance—the rudiments of the appendages of the ring. At first, all the appendages were alike, but, as they grew, most of them became distinguished into a stem and two terminal divisions, to which, in the middle part of the body, was added a third outer division; and it was only at a later period, that by the modification, or absorption, of certain of these primitive constituents, the limbs acquired their perfect form.

12 Thus the study of development proves that the doctrine of unity of plan is not merely a fancy, that it is not merely one way of looking at the matter, but that it is the expression of deep-seated natural facts. The legs and jaws of the lobster may not merely be regarded as modifications of a common type,—in fact and in nature they are so,—the leg and the jaw of the young animal being, at first, indistinguishable.

13 These are wonderful truths, the more so because the zoologist finds them to be of universal application. The investigation of a polype, of a snail, of a fish, of a horse, or of a man, would have led

us, though by a less easy path, perhaps, to exactly the same point. Unity of plan everywhere lies hidden under the mask of diversity of structure—the complex is everywhere evolved out of the simple. Every animal has at first the form of an egg, and every animal and every organic part, in reaching its adult state, passes through conditions common to other animals and other adult parts; and this leads me to another point. I have hitherto spoken as if the lobster were alone in the world, but, as I need hardly remind you, there are myriads of other animal organisms. Of these, some, such as men, horses, birds, fishes, snails, slugs, oysters, corals, and sponges, are not in the least like the lobster. But other animals, though they may differ a good deal from the lobster, are yet either very like it, or are like something that is like it. The cray fish, the rock lobster, and the prawn, and the shrimp, for example, however different, are yet so like lobsters, that a child would group them as of the lobster kind, in contradistinction to snails and slugs; and these last again would form a kind by themselves, in contradistinction to cows, horses, and sheep, the cattle kind.

14 But this spontaneous grouping into "kinds" is the first essay of the human mind at classification, or the calling by a common name of those things that are alike, and the arranging them in such a manner as best to suggest the sum of their likenesses and unlikenesses to other things.

15 Those kinds which include no other subdivisions than the sexes, or various breeds, are called, in technical language, species. The English lobster is a species, our cray fish is another, our prawn is another. In other countries, however, there are lobsters, cray fish, and prawns, very like ours, and yet presenting sufficient differences to deserve distinction. Naturalists, therefore, express this resemblance and this diversity by grouping them as distinct species of the same "genus." But the lobster and the cray fish, though belonging to distinct genera, have many features in common, and hence are grouped together in an assemblage which is called a family. More distant resemblances connect the lobster with the prawn and the crab, which are expressed by putting all these into the same order. Again, more remote, but still very definite, resemblances unite the lobster with the woodlouse, the king crab, the water flea, and the barnacle, and separate them from all other animals; whence they collectively constitute the larger group, or class, *Crustacea.*

But the *Crustacea* exhibit many peculiar features in common with insects, spiders, and centipedes, so that these are grouped into the still larger assemblage or "province" *Articulata;* and, finally, the relations which these have to worms and other lower animals, are expressed by combining the whole vast aggregate into the sub-kingdom of *Annulosa.*

16 If I had worked my way from a sponge instead of a lobster, I should have found it associated, by like ties, with a great number of other animals into the sub-kingdom *Protozoa;* if I had selected a fresh-water polype or a coral, the members of what naturalists term the sub-kingdom *Cœlenterata,* would have grouped themselves around my type; had a snail been chosen, the inhabitants of all univalve and bivalve, land and water, shells, the lamp shells, the squids, and the sea-mat would have gradually linked themselves on to it as members of the same sub-kingdom of *Mollusca;* and finally, starting from man, I should have been compelled to admit first, the ape, the rat, the horse, the dog, into the same class; and then the bird, the crocodile, the turtle, the frog, and the fish, into the same sub-kingdom of *Vertebrata.*

17 And if I had followed out all these various lines of classification fully, I should discover in the end that there was no animal, either recent or fossil, which did not at once fall into one or other of these sub-kingdoms. In other words, every animal is organized upon one or other of the five, or more, plans, the existence of which renders our classification possible. And so definitely and precisely marked is the structure of each animal, that, in the present state of our knowledge, there is not the least evidence to prove that a form, in the slightest degree transitional between any of the two groups *Vertebrata, Annulosa, Mollusca,* and *Cœlenterata,* either exists, or has existed, during that period of the earth's history which is recorded by the geologist. Nevertheless, you must not for a moment suppose, because no such transitional forms are known, that the members of the sub-kingdoms are disconnected from, or independent of, one another. On the contrary, in their earliest condition they are all similar, and the primordial germs of a man, a dog, a bird, a fish, a beetle, a snail, and a polype are, in no essential structural respects, distinguishable.

18 In this broad sense, it may with truth be said, that all living animals, and all those dead faunæ which geology reveals, are

bound together by an all-pervading unity of organization, of the same character, though not equal in degree, to that which enables us to discern one and the same plan amidst the twenty different segments of a lobster's body. Truly it has been said, that to a clear eye the smallest fact is a window through which the Infinite may be seen.

19 Turning from these purely morphological considerations, let us now examine into the manner in which the attentive study of the lobster impels us into other lines of research.

20 Lobsters are found in all the European seas; but on the opposite shores of the Atlantic and in the seas of the southern hemisphere they do not exist. They are, however, represented in these regions by very closely allied, but distinct forms—the *Homarus Americanus* and the *Homarus Capensis:* so that we may say that the European has one species of *Homarus;* the American, another; the African, another; and thus the remarkable facts of geographical distribution begin to dawn upon us.

21 Again, if we examine the contents of the earth's crust, we shall find in the latter of those deposits, which have served as the great burying grounds of past ages, numberless lobster-like animals, but none so similar to our living lobster as to make zoologists sure that they belonged even to the same genus. If we go still further back in time, we discover, in the oldest rocks of all, the remains of animals, constructed on the same general plan as the lobster, and belonging to the same great group of *Crustacea;* but for the most part totally different from the lobster, and indeed from any other living form of crustacean; and thus we gain a notion of that successive change of the animal population of the globe, in past ages, which is the most striking fact revealed by geology.

22 Consider, now, where our inquiries have led us. We studied our type morphologically, when we determined its anatomy and its development, and when comparing it, in these respects, with other animals, we made out its place in a system of classification. If we were to examine every animal in a similar manner, we should establish a complete body of zoological morphology.

23 Again, we investigated the distribution of our type in space and in time, and, if the like had been done with every animal, the sciences of geographical and geological distribution would have attained their limit.

24 But you will observe one remarkable circumstance, that, up to this point, the question of the life of these organisms has not come under consideration. Morphology and distribution might be studied almost as well, if animals and plants were a peculiar kind of crystals, and possessed none of those functions which distinguish living beings so remarkably. But the facts of morphology and distribution have to be accounted for, and the science, the aim of which it is to account for them, is Physiology.

25 Let us return to our lobster once more. If we watched the creature in its native element, we should see it climbing actively the submerged rocks, among which it delights to live, by means of its strong legs; or swimming by powerful strokes of its great tail, the appendages of the sixth joint of which are spread out into a broad fan-like propeller: seize it, and it will show you that its great claws are no mean weapons of offence; suspend a piece of carrion among its haunts, and it will greedily devour it, tearing and crushing the flesh by means of its multitudinous jaws.

26 Suppose that we had known nothing of the lobster but as an inert mass, an organic crystal, if I may use the phrase, and that we could suddenly see it exerting all these powers, what wonderful new ideas and new questions would arise in our minds! The great new question would be, "How does all this take place?" the chief new idea would be, the idea of adaptation to purpose,—the notion, that the constituents of animal bodies are not mere unconnected parts, but organs working together to an end. Let us consider the tail of the lobster again from this point of view. Morphology has taught us that it is a series of segments composed of homologous parts, which undergo various modifications—beneath and through which a common plan of formation is discernible. But if I look at the same part physiologically, I see that it is a most beautifully constructed organ of locomotion, by means of which the animal can swiftly propel itself either backwards or forwards.

27 But how is his remarkable propulsive machine made to perform its functions? If I were suddenly to kill one of these animals and to take out all the soft parts, I should find the shell to be perfectly inert, to have no more power of moving itself than is possessed by the machinery of a mill when disconnected from its steam-engine or water-wheel. But if I were to open it, and take out the viscera only, leaving the white flesh, I should perceive that the lobster could

bend and extend its tail as well as before. If I were to cut off the tail, I should cease to find any spontaneous motion in it; but on pinching any portion of the flesh, I should observe that it underwent a very curious change—each fibre becoming shorter and thicker. By this act of contraction, as it is termed, the parts to which the ends of the fibre are attached are, of course, approximated; and according to the relations of their points of attachment to the centres of motions of the different rings, the bending or the extension of the tail results. Close observation of the newly-opened lobster would soon show that all its movements are due to the same cause—the shortening and thickening of these fleshy fibres, which are technically called muscles.

28 Here, then, is a capital fact. The movements of the lobster are due to muscular contractility. But why does a muscle contract at one time and not at another? Why does one whole group of muscles contract when the lobster wishes to extend his tail, and another group when he desires to bend it? What is it originates, directs, and controls the motive power?

29 Experiment, the great instrument for the ascertainment of truth in physical science, answers this question for us. In the head of the lobster there lies a small mass of that peculiar tissue which is known as nervous substance. Cords of similar matter connect this brain of the lobster, directly or indirectly, with the muscles. Now, if these communicating cords are cut, the brain remaining entire, the power of exerting what we call voluntary motion in the parts below the section is destroyed; and, on the other hand, if, the cords remaining entire, the brain mass be destroyed, the same voluntary mobility is equally lost. Whence the inevitable conclusion is, that the power of originating these motions resides in the brain and is propagated along the nervous cords.

30 In the higher animals the phenomena which attend this transmission have been investigated, and the exertion of the peculiar energy which resides in the nerves has been found to be accompanied by a disturbance of the electrical state of their molecules.

31 If we could exactly estimate the signification of this disturbance; if we could obtain the value of a given exertion of nerve force by determining the quantity of electricity; or of heat, of which it is the equivalent; if we could ascertain upon what arrange-

ment, or other condition of the molecules of matter, the manifestation of the nervous and muscular energies depends (and doubtless science will some day or other ascertain these points), physiologists would have attained their ultimate goal in this direction; they would have determined the relation of the motive force of animals to the other forms of force found in nature; and if the same process had been successfully performed for all the operations which are carried on in, and by, the animal frame, physiology would be perfect, and the facts of morphology and distribution would be deducible from the laws which the physiologists had established, combined with those determining the condition of the surrounding universe.

82 There is not a fragment of the organism of this humble animal whose study would not lead us into regions of thought as large as those which I have briefly opened up to you; but what I have been saying, I trust, has not only enabled you to form a conception of the scope and purport of zoology, but has given you an imperfect example of the manner in which, in my opinion, that science, or indeed any physical science, may be best taught. The great matter is, to make teaching real and practical, by fixing the attention of the student on particular facts; but at the same time it should be rendered broad and comprehensive, by constant reference to the generalisations of which all particular facts are illustrations. The lobster has served as a type of the whole animal kingdom, and its anatomy and physiology have illustrated for us some of the greatest truths of biology. The student who has once seen for himself the facts which I have described, has had their relations explained to him, and has clearly comprehended them, has, so far, a knowledge of zoology, which is real and genuine, however limited it may be, and which is worth more than all the mere reading knowledge of the science he could ever acquire. His zoological information is, so far, knowledge and not mere hearsay.

83 And if it were my business to fit you for the certificate in zoological science granted by this department, I should pursue a course precisely similar in principle to that which I have taken to-night. I should select a fresh-water sponge, a fresh-water polype or a *Cyanœa*, a fresh-water mussel, a lobster, a fowl, as types of the five primary divisions of the animal kingdom. I should explain their structure very fully, and show how each illustrated the great principles of zoology.

Discussion

1. What idea about the animal kingdom gives unity to the selection?
2. Summarize briefly the facts disclosed about the lobster's form, or morphology, his biological classification, and his physiology. Distinguish between morphology and physiology.
3. Study paragraphs 13–17 as an example of classification. What principles of classification are used?
4. Pick out phrases or sentences which show that Huxley considers himself a teacher.
5. To what degree is the essay an argument for laboratory study?
6. Examine the following words in their contexts (the paragraph numbers are given). Write down your definition of what the words seem to mean in context, then check the meanings in a dictionary. How many of the words are defined for you by the author?
   homologous (2); *carapace* (5); *mandible* (7); *rudiments* (11); *species, genus* (15); *primordial* (17); *constituents* (26); *capital* (28); *mobility* (29).

JAMES THURBER · *Footnote on the Future*

The scientists, in spite of everything, have begun to look optimistically into the future of Man and of the Universe. Just when I had been led to believe that the human being and his planet had no more hope of a prolonged and improved existence than a lace valentine in hell, word is brought to me by my pageboys that neither the sun nor the mind of man is, after all, going out. Unlimited supplies of hydrogen atoms have been discovered in the sun and billions of unused brain cells have been detected in the cortex of Man. The scientists, who look beyond the little menaces of the mundane moment, are, quite naturally, cheerful.

— Reprinted from *The New-Yorker* by permission. Copyright 1940 the F-R. Publ. Corp. Also in *My World and Welcome to It!* by James Thurber, Harcourt, Brace and Company, Inc., 1942.

I remember when the scientists were not so cheerful; I remember when Man and his flimsy globe were doomed. I had become, before the good news arrived, a timid eschatologist, quietly waiting for the finish of this fragile Luna moth we call mortality. In 1910, when I was a stripling of sixteen going on seventeen, the bearded watchers of the skies (at least those in the Middle West) fondly predicted that Halley's Comet was going to strike the planet a staggering blow somewhere between Boise and Boston, knocking it far out into the oblivious Darkness, the incomprehensible Cold. Nothing happened, except that I was left with a curious twitching of my left ear after sundown and a tendency to break into a dogtrot at the striking of a match or the flashing of a lantern.

In the decade that followed the destruction of the world by Mr. Halley's recurrent monument, there were various cosmic alarms and flourishes, mainly dealing with the odds-on probability that the sun-spots, which were spreading as rapidly as ulcerative gingivitis, would before long turn the sun into a monstrous black cinder which for several million years would give off a faint buzzing sound, but no heat at all. In the immeasurable sphere of this cold, colossal buzzing no leaf would stir, no voice would cry; there would be no ear to listen. (It was at this period that I began to compose what an old city editor for whom I worked called "morbid pomes.")

In 1933, I think it was—anyway, it was after my best years had been spent, so I didn't worry so much—the universe was reported to be shrinking at an appalling rate and we were given only a few paltry aeons to prepare our species for the end, a handful of millenniums before the indescribable boundaries should close in on us, smothering, without malice or favor, gold-star mothers, collectors of internal revenue, and little laughing girls on their way to school. Since 1933, as everyone knows, we have been imperiled by widely assorted threats of extinction, mainly the even-money chance that the topsoil of the world, in one vast, restless conspiracy of movement, would bury us all, like Leptis Magna, under its soft and whispering oblivion.

The menaces to God's wonderful clockwork have all passed, like the Great Noise over Brooklyn. The universal goose now hangs high. After long and painstaking research, Professor Hans Bethe of Cornell has come out with the announcement that the sun has enough hydrogen atoms to last it twelve thousand million years. There is cheerful news, too, from other cosmic fronts. The topsoil of the earth seems to have settled down—or at least to be biding its time; the universe has quit shrinking and may, indeed, even be expanding, although I don't think so; and a Kansas scientist reports that when Halley's Comet gets back, in 1985, it will be so frayed and fuzzy that it won't be able to cause any really serious trouble. (I will be ninety when Halley's Comet gets back and will no longer much care what happens. I may even be disappointed, in my querulous nonagenarian way, if the famous visitor does not deal California a glancing backhand blow before it goes careening off again into the illimitable spaces upon its unfathomable round.)

Now that Man, in spite of his sins, stands a fair chance of lasting another twelve thousand million years, other things being equal, it might be interesting to speculate on what he is going to be like at the end of that time, or even in one twelve-thousandth of that time. There is always, of course, the chance, sun or no sun, that the insects may get him within the next two or three hundred years, but after worrying about this since 1907, I have come to the conclusion that Man will finally master the tiny creatures, in spite of their greater agility and superior cleverness. My confidence in Man's ultimate supremacy over the weevil and the slug has been greatly strengthened by the findings of the late Dr. Frederick Tilney, the eminent brain specialist. After many years of research, Dr. Tilney came to the conclusion that Man is using only one-fourth of his stock of fourteen billion brain cells. In short, he is using only 3,500,000,000 brain cells. Offhand, to the layman, to you and me, this might seem like a great many brain cells to be using, since it runs into ten figures and we Americans are impressed by anything that runs into more than four. We must, however, fight against the kind of complacency which would lead us to sit back and be satisfied with the use of only three and a half billion brain cells. When we wake up in the morning we should not say to ourselves, gleefully, "I am using more than three billion brain cells. Good Lord, think of it!" We should, on the contrary, say, "I am using only one-fourth of the brain cells with which a generous Providence has provided me. Is that any way to live, for God's sake?"

It was Dr. Tilney's belief that when Man begins to use all his brain cells—in a thousand years, say, or ten million—he will become wise enough to put an end to wars, depressions, recessions, and allied evils. Dr. Tilney seemed to believe that a man four times as mentally powerful as we are today would, if handed a rifle by some throwback major who was still using only 3,500,000,000 brain cells, exclaim, "Don't be a fourth-wit, my man," and refuse to go to war. I am sorry that I cannot go the whole way with Dr. Tilney in his sanguine prophecies. What, I keep saying to myself, is to keep Man from becoming four times as ornery, four times as sly and crafty, four times as full of devilishly ingenious devices for the extinction of his species? In the history of mankind the increase of no kind of power has, so far as I can find out, ever moved naturally and inevitably in the direction of the benign. It has, as a matter of fact, almost always tended in the direction of the malignant; don't ask me why, it just has. This tendency, it seems to me, would be especially true of the power of the mind, since it is that very power which is behind all the deviltry Man is now up to and always has been up to.

Let us turn our attention for a moment to those prehistoric Americans, Sandia man, Folsom man, and the Minnesota Maid, whose fossilized remains have been dug up from the substrata of this ancient continent. I have no way of knowing for sure, but I venture to say that the cells which were actually functioning in the brains of Sandia, Folsom, and the Maid did not number more than 875,000,000, or about one-fourth as many as are working today in your brain or mine or Mussolini's. Now, it should follow, if Dr. Tilney was on sound ground, that the man of today is four times as pacific and four times as economically sound as Sandia and Folsom. Anybody who has more than eleven hundred cells working in his cortex knows that this is not true. Man, as pacifist and economist, has gone steadily from bad to worse with the development of his brain power through the ages. I view with alarm, therefore, any future increase of his cortical activity.

Let us proceed to another dolorous conclusion. *Time,* the weekly scientific journal, reported some time ago that the Minnesota Maid "apparently fell or was thrown into a Glacial Period lake." How *Time,* always infallible, knew that the Maid either fell or was thrown into the lake I don't know. I should have thought there was also the possibility that, driven to distraction by people who were using only 875,000,000 brain cells, she may have swum quietly out into the lake to drown, of her own accord. However, let us assume that she was thrown. Now, you would think, if Dr. Tilney was right, that the increase of Man's functioning brain cells in the millions of years which have elapsed since the Maid's death would have prompted Man to refrain from throwing Woman into lakes. This is, unhappily, not the case. I estimate, after sitting for half an hour thinking, that more than four times as many women are thrown into lakes in America nowadays as were thrown into them during the era in which the Minnesota Maid lived. How many, at this rate of increase, will be thrown into American lakes twelve thousand million years from now, I leave to your imagination.

The only note of cheer I can strike, in conclusion, is to point out the possibility that, in spite of Dr. Tilney's beliefs, Man may never be able to use more than one-fourth of his brain cells. In that case he is not likely to become much more troublesome than he is now. He is certain, at any rate, not to become four times as troublesome. This is, I know, not much in the way of hope for the future, but it is, after all, something. At any rate, it is all I have to offer.

You may all file out quietly now, with the exception of Miss Winthrop, whom I should like to see for a few moments after class. Miss Winthrop may not be aware of it, but the little song she has chosen to compose especially for this occasion has not been lost upon my ears. I refer, Miss Winthrop, to "The Japanese Sandia Man," which you have been singing quite audibly during the last half-hour of my lecture. The rest of you may go.

DONALD CULROSS PEATTIE · *The Santa Fe Trail*

There's a bit of road that goes rising and dipping, and swooping over the red desertic hills, dotted with juniper and piñon pines, where my heart always beats faster with the sense of high

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adventure to come. And if that is true of me, it must be true of unnumbered thousands and hundreds of thousands who know the road from the watertank town of Lamy, New Mexico, to Santa Fe, just ten miles away. And what is true of Americans today—who come from every State in the Union, to judge by the car licenses I have seen on that stretch of U.S. Highway 84 and 85—has been true of others long dead this century past and more. For those ten miles were the last lap upon the immortal Santa Fe Trail.

Of all the great roads by which the American people have surged forward—the Wilderness Road, the Natchez Trace, the Oregon Trail, the Mormon Trail, the old Spanish Trail to California, the Overland Route—none surpasses the road to Santa Fe in authentic romance. I felt it that first time I ever took it seventeen years ago, when the sun was sinking in purple shadows behind the Jemez Mountains and the snowy tips of the Sangre de Cristos (the Blood of Christ Mountains) were flashing the last twinkling signals of the planet to the departing star. I felt it again when, as soon as gas rationing was lifted, I struck out again for Santa Fe, drawn back to it irresistibly as I have always been.

And again I saw cars from all the States. For the people who love Santa Fe are a brotherhood, and if they don't wear recognition badges, they soon find each other in any conversation that turns on travel. I must say, too, that they are a particularly choice lot—or they wouldn't be bound for Santa Fe. They must possess the deep sense of the past which breathes out from that place, they must have a warm feeling for the good-natured, delightful Mexican or old Spanish-New-Mexican families that give the town so much of its color. They must be interested in the American Indian, and his culture, which reaches its finest flower today in the Southwest. And they must love the desert and the mountains. Or they would not come; for Santa Fe has no night-spots and no amusement parks, no freak wonders of Nature, and none of the chromium-plated gadgets that make some people feel at home.

Yet Santa Fe, the oldest capital within the United States, founded in 1609 by Don Pedro de Peralta, has exercised its powers over the imagination of a certain type of American from the day when knowledge of it, by the most roundabout ways, crept eastward across a trackless waste to the French settlements of Louisiana and the *voyageurs* of early French Canada and, later, to the Anglo-

Americans as they pressed through the eastern hardwood belt and emerged, half elated, half appalled, upon the treeless prairies.

Fabulous as Samarkand, inaccessible as Lhasa, forbidden as the inner city of old Peking, the town of Santa Fe beckoned tantalizingly across a continent to Americans of the early republic. Yet as late as 1820, more than two hundred years after the Spanish founded Santa Fe, only a handful of English-speaking Americans had ever seen it.

For it lay beyond the trackless prairie and the burning Cimarron desert, on the far side of the Rockies' rearing wall. To reach it one had to pass through some seven hundred shelterless miles of Indian country—the lands of the fierce Pawnees and thieving Osages. Bands of Cheyennes might sweep across the venturesome explorer's track from the north, or Comanches from the south, while Apaches kept the warpath in the mountains.

Even those few explorers who by luck and endurance lived to gaze down on the little city's flat roofs—so strange to American eyes—soon found themselves in a Spanish prison. Or they were expelled again on the Great Plains, often without horses or guns. Such as survived the homeward journey told tales of hardships and hostility that should have discouraged all comers.

But forbidden fruits are always tempting. Those who returned had yarns to spin of silver bullion and minted gold, of turquoise mines and fine-tooled leather. They described a town all built of adobe—sun-baked bricks of clay—and pervaded by the haunting incense of piñon smoke from the chimneys, and by the clangor of cathedral bells. And there was the fascination of the melodious Spanish tongue and (whisper it!) of the alluring womenfolk who were not more reserved than human nature could bear.

Santa Fe herself was like some lovely senorita locked by a stern parent at the top of a mountain tower and allowed to see no one outside the family. For with deep suspicion the Spanish governors watched the westward expansion of the stripling giant that was the United States. The priests feared the coming of Protestant "heretics," and the merchants of Mexico City were jealous for the Santa Fe trade. They were enjoying the monopoly of a closed market; they could fix the prices without competition.

And all the while the gringos, the *Yanqui* business men, five hundred miles nearer, had everything Santa Fe needed—

cambrics and calicoes, velvets and crepes, shawls of silk and wool, looking-glasses, knives, axes, traps, pots and pans. Without manufactures of her own, the senorita would have bought every machine-made article the Americans had to sell. In exchange she could balance the trade with costly furs and precious metals for which American markets hungered. But Spanish jealously blocked all that, and the Santa Feans were no less resentful than the frustrated Yankee traders.

Of these last there were scores—wiry men who had been pushing ever farther west to barter with the Indians, who had endured every hardship and knew the risks of conducting business hundreds of miles from law and order. One such was Captain William Becknell, whom destiny selected, with his party of fur traders, in the autumn of 1821 at the foot of the Rockies. Becknell was in Spanish territory and knew it. So when a company of troops dashed towards him he expected nothing but imprisonment and confiscation of his goods.

He was astonished to hear himself politely urged to continue to Santa Fe as the guest of the two-months-old "Mexican Empire," which had just declared independence of Spain. For, once the Spanish yoke was thrown off, New Mexico could not get the gringo traders to her gates fast enough. The senorita had got hold of the key to her tower and thrown it invitingly down to her rescuers. So, four days later, Becknell's wagons rolled into the mysterious city, to be welcomed with shouts of rejoicing. His stock sold out at a rousing profit.

When Becknell returned to the United States, he reined his wagons to a halt in the frontier town of Franklin, Missouri, slit the rawhide bags in his wagon, and allowed the big, ringing coins of Spanish gold to roll into the gutter. For the moment, Franklin could only goggle in wonderment. The United States at that time was metal poor; too much of its business was conducted in paper money whose purchasing power fluttered in every economic breeze.

Franklin saw its opportunity. Everyone who had a dollar rushed to invest it in trading goods. One young woman put $90 in merchandise, and her brother brought her back $900 in gold as her 'share of the profits. That first year, the value of the American goods exported was only $15,000. But by 1826, when a rusty-headed boy named Kit Carson ran away from his apprentice's bench in a

Franklin saddler's shop to join the westward wagons, the value of Missouri exports had risen to $90,000, and two years later it would reach $150,000.

Such trade could not be kept a secret or the monopoly of one town. Historically, little Franklin was the first of the picturesque prairie "ports," as they called themselves. Yet other towns stood ready to rival Franklin's place. Most of them were near the great bend of the Missouri, where it swings east on its way to the sea. Boats could bring goods that far, but there the covered wagons and the pack trains must take over. So there sprang up "ports" like Westport, Fort Osage, Independence, and Fort Leavenworth and, later, Kansas City.

Each in turn had its boom, and every spring it saluted with fusillades the long departing trains laden with dry goods and hardware and provisions of food and firearms. And welcomed home with yells, the returning wagons, with their cargoes of buffalo robes, wood, precious furs, and good ringing gold. Merchants made mushroom fortunes, and wagoners, on the return, hit the town with their Spanish dollars like sailors in port. Grog shops flourished; gambling hells never closed their doors, "bad men" had their say and bad women their day.

Yet each prairie "port" in its turn vanished or became something else. The ravenous Missouri ate the town of Franklin alive. Kansas City engulfed Westport. Independence lived down its gaudy past to become a respectable Middle Western community.

For us, there were two immediate tangible results of the Santa Fe trade. The most obvious was gold and silver, which poured into American business like a transfusion of rich blood. In the panic of 1837, Spanish metal saved the day for many a frontier community. Forty-five thousand dollars in specie arrived in the nick of time to rescue the Bank of Missouri from the most dangerous run it had ever had. But no one can compute the value of the other prize—the Santa Fe "jacks and jennies," which, originating the world-renowned Missouri mule, became the biggest thing in the life of the American farmer till the coming of the tractor. Stronger than a horse, faster than oxen, the mule pulled the Santa Fe traders through every tough spot, from the waterless Cimarron desert to the rock-strewn Raton Pass.

Whether with horses, or mules, or oxen, the Santa Fe caravans lumbered forth every spring, all hearts high with adventure. "Catch up—catch up!" was the cry each morning, the signal for packing up and hitching. "All set!" would ring the answer, from wagon to wagon, like a bugle note. "Stretch out!" was the barked command, as yokes rattled, chains jangled, uproarious Missouri wagoners let off wildcat yells of animal spirits. Then a hundred rawhide whips cracked across the loins of the brute beasts, and they set their shoulders to the yokes, strained, heaved, and started the big wheels rolling. "Fall in!" was the last command, the signal to form in a double file. This was the almost universal order of the march, for in case of Indian attack the two ranks could quickly bend out and form a circle.

About the third day out, with the last of the eastern hardwood forest left behind at Council Grove, the covered wagons rolled along, like galleons under canvas, across the shelterless sea of grass. It was a sea four hundred miles and more wide—an echoless waste, at first, all but trackless and featureless. It was swept by many moods—smiling and even decked with flowers, arched by a sky of tender blue, and then abruptly swept by hailstorms or roaring twisters, or lashed with howling blizzards. There might be antelope and buffalo all the way, to feast the travellers as they "nooned it" each day beneath the gossiping cottonwoods or by night sent their sparks flying to the stars. Or there might be lean pickings with nothing to eat but salt pork and sourdough. There could be thirst on the sea of grass such as shipwrecked sailors know on the sea of salt, when men had to cut off the ears of their mules and drink the blood, or kill a buffalo for the filthy water in its stomach. And at every water hole a painted foe might lurk.

Actually, only eleven white men lost their scalps on the Santa Fe trail between 1821 and 1843, for seasoned Indian traders like the men who pioneered the Trail didn't shoot Indians on sight, slaughter all the game, and stake out the Indians' lands as did the greenhorn homesteaders in the rush a quarter of a century later, when goaded beyond savage patience, the Indians fought bravely for their lands and lives.

So sober history records that most of the caravans reached the mountains uneventfully. Which doesn't mean that stock didn't die or that Indians didn't run it off in the night, or that wagons didn't break down, firearms go off accidentally and kill someone, or appendices burst four hundred miles from a doctor. Hardship, exhaustion, suffering, and even death, were commonplaces of the Trail.

But not the most hardened old-timer could look without a thrill at that first sight of the mountains, when the snowy summits lifted over the edge of the world like a tremulous mirage, like a cloud, like the tip of an angel's wing, and then, sharpened to reality —a gable of ice against the elemental blue. Time then to turn south, along the River Purgatoire ("Picketwire" to the Missourians), and to head for the Raton Pass, where even today the transcontinental trains creep and pant up the steep grade amongst the pines. Many an axle broke in that rock-strewn waste; two miles a day was good time, with two hundred mules and fifty swearing men to do the work, in the tough old Raton. But beyond lay New Mexico, its mesas ruddy as an old Indian, its airs as soft as a Spanish girl's laughter.

And when at last fabled Santa Fe came into view the wagoners usually called a halt and spent half a day "rubbing up"—washing, changing to their best clothes, sleeking their hair, polishing the harness. Then, in grand style, they rolled all together into the dusty plaza of the little capital. There was the governor's fine *palacio,* over two hundred years old, and standing today; there was the *presidio* with its barracks and drill ground, which had been through the great Indian siege of 1680. There was the Chapel of Our Lady of Guadalupe, where golden ornaments gleamed in its dim interior and silver sang in its bells. And, closing up the square, the inn of La Fonda opened its hospitable doors.

All about clustered the little town, washed with lime and mica to a glittering whiteness. By day it might seem dusty and hot, or even lifeless at the siesta hour. By night Santa Fe roused itself; doors in the narrow streets stood open, and orange candlelight and music, plucked from persuasive strings, lured the bearded strangers each to his own kind of pleasure. There were the famous monte tables for those who wished to gamble; there were fandangos for those who would dance; there were women to make love to, and for the Americans of refinement, the home of the aristocratic families were open, where one dined on silver plates and drank delicate wines.

The honeymoon of Missouri and Santa Fe could not endure long. Mexico and the United States were headed inevitably for a clash of interests. A dozen causes, and twice as many mistakes on both sides, brought the two nations to war in 1846. And now the Trail was a trail no longer; it had become a road to glory, for over it Stephen Kearny marched his legions of Missourians, arrow-straight to New Mexico. Many of the men in the ranks must have known every water hole and ford, every pass and ambush. With dramatic suddenness Kearny was at the mountain gates; the young New Mexican officers in General Armijo's staff informed him that they would not fight against the Americans. Armijo fled, and Kearny entered Santa Fe, amid the congratulations of the townsfolk, without firing a shot. So the Trail led this nation onward to the easiest conquest in the history of American expansion.

Today you can travel almost identically the route worn deep by those straining, lumbering old Conestogas, for when the great transcontinental line of the Atchison, Topeka, and Santa Fe was laid, it took, for good practical reasons, the historic route. Rails of steel replace the historic ruts, and where the teams once plodded at three miles an hour, in clouds of dust, the air-conditioned streamliners fling you across space at a hundred miles an hour.

Or, now that we are motoring again, you may take U.S. Highway 50 from Kansas City to La Junta, Colorado, and still be following the Trail with considerable fidelity. Take 350 to Trinidad and, after that, let 85 carry you over the Raton in a few swoops as easy as a hawk's soaring, and so right on in to Santa Fe.

Sights that the pioneers knew are, many of them, unchanged and, praise God, unchangeable. Such are the vast arc of the sky over the high plains, the breath-taking lift of snow-hooded peaks, and the long, red New Mexican mesas. In Santa Fe itself there is still the enticing odor of piñon smoke, and still the sweet bells call to the soul.

Santa Fe of today is far from being the Santa Fe of the early days of the Trail, to be sure, but it is still the very Mecca and capital for Indian archaeologists—a few professional and many amateur. Here one is at the heart of the highest civilization developed by the Indians of the United States. Taos and Santa Clara, Acoma and Tesuque, Laguna and Zuni, are classic names to the student of the American Indian, and all these aboriginal settlements are close at hand. Here the collector of Indian rugs and pottery, baskets and jewelry, can purchase the genuine article right from the hands of the artisans—which, to my taste, is the only way to make such a collection precious.

The lure of Santa Fe's sunlight and the glow of her deserts are irresistible to many artists. Other painters are caught by the brilliance of Mexican and Indian costumes, strange lights and shadows in fine old Indian and Mexican faces. An ideal art museum right on the square rotates the best in local pictures and forms a continuing nucleus for the life of the artist colony.

With the artists came the writers—some to seek primarily the freedom of Santa Fe life from materialistic surroundings, others to write of life in Santa Fe, whether of today or yesterday. And after the writers and artists have come the people who like to settle where artists and writers settle, to enjoy the inviting climate, to build adobe houses, in the delightful style that has come to be thought of as the Santa Fe style, and to hang bright peppers at the door and otherwise "go native," as far as their origins and habits allow.

So, the old Santa Fe Trail is still luring the American people —or at least a selected sort of them—along its once dusty and dangerous miles. And still, at the end of the Trail, glimmer the romance and release that brought the ancestors of the present influx of Middle Westerners from Independence and Westport, Kansas City and Fort Leavenworth, to the old plaza at the heart of the city.

Writing

A. Write a theme about a trip you once took. Emphasize interesting places visited en route and present historical information you gathered. Make sure that you have some principle of unity in the theme.

B. Write a research theme that presents the history of a particular place such as the town of Santa Fe—or your home town.

THOMAS BEER · *The End of the Daltons*

At half past nine in the bright morning of October 5, 1892, a lad named John Sibert was helping his aunt to wash dishes in a house of Coffeyville, Kansas. He had arrived in the little city two days before and was leaving Coffeyville on the train at noon. Coffeyville had two topics, that week; the main street was torn up for new drains and somebody had told somebody else from saddle to saddle on the prairie that Bob Dalton had bragged he would raid his own town in broad daylight. At half past nine, then, John Sibert was helping to wash dishes diligently. Between that moment and the second of twenty-five minutes to ten, rifles crashed. John leaped down his aunt's steps and slid against a post, smashing his watch. Some lad ran past him yelling: "The Daltons are in!" and the word reached a clerk at the station. In a few minutes men in Omaha and Kansas City were shouting the news as the one word, "Dalton, Dalton, Dalton, Dalton . . ." clicked from the keys all through the midlands. John Sibert loped around a corner and suddenly faced two long, grave young men with rifles in their hands. He didn't know Bob and Emmett Dalton from any other strangers and he started to ask something. Bob drawled: "Keep away from here, bud, or you'll get hurt," and shoved the boy aside placidly, then placidly strolled along with Emmett, snapping his fingers and whistling through his teeth. At once a lad named Luke Baldwin hurried into sight and didn't pause when one of the brothers shouted to him. Bob Dalton killed him forthwith and the pair trotted from John Sibert's view. . . . The famous gang rode into town at half past nine. They left their horses in an alley and calmly strolled up to separate in the space before the town's two banks. Bob and Emmett plundered one bank. Grattan Dalton with the henchmen Bill Powers and Dick Broadwell[1] attended to the other. Citizens grabbed the rifles with which the antecinemic West did its serious shooting and the fight began.

—Reprinted from *Hanna, Crane and the Mauve Decade* by Thomas Beer, by permission of Alfred A. Knopf, Inc. Copyright 1926, 1941 by Alfred A. Knopf, Inc.

[1] Called sometimes "Jack of Diamonds" from the song which he sang constantly. The song now passes as a "Negro melody." [Author's note.]

Bright spires of glass toppled from frames of windows; smoke went in surges along the street as men fired busily from porches or through doorways. There are a hundred legends of what happened. Young John Sibert knelt beside the dying boy in the alley behind one bank and heard a man named Gump swearing in the pain of a shattered hand. Presently Broadwell rode wildly down the street with his hands gripped on the horn of his great Mexican saddle and fell dead from his mount a little way from the noisy town. Somebody killed Bill Powers. Grattan Dalton ran down the sidewalk with blood on his face and paused to rip the green handkerchief from his throat in full range of the batteries before he turned at the corner of a stable and fired back, killing the city's marshal with a superb shot from the hip. His shoulder was riddled so that he couldn't lift his rifle. He lurched from sight down the alley toward the tethered horses. Bob Dalton strolled into view, loading his rifle, and a hundred muzzles were aimed at his blue shirt. One ball caught him above the navel but he walked on and sat on a heap of stones beside a barn, firing again. A man named Kloehr ran from cover straight at the terrible rifle and shot the gang's captain in the lungs, then whirled and sent a bullet through Grattan Dalton's throat as the youngest brother crawled toward the plunging horses. Firing stopped. Men hurried up and a thick group formed around Bob Dalton in his carmine puddle on the clay. The body heaved in its blood but he kept yelling: "Ride!" Then someone howled and the crowd saw Emmett Dalton struggling among the horses. He was wounded four times when he got into his saddle and sat huddled with his gloves clasped on his groin. Men lowered their rifles, expecting him to fall, as men shot in the groin do, generally. But all the brothers were valiant. He spurred his horse down the alley and swung from the stirrups to seize Bob's arm. Politeness ended. Carey Seaman blew in his side with a fast shot. The last Dalton slid across his brother's body. It was now ten minutes to ten.

Discussion

1. What narrative touches and what words show that the author does not let the account lose anything in the telling?
2. Would a careful following of this account yield a good episode in a movie? Or would the result be just another hackneyed Wild West shoot-'em-up scene?

Writing

Write a composition which re-creates an exciting historical incident. Base your account on as many authentic facts as you can gather, but use imagination to supply vivid details of background and action. Possible topics are: the last hours of Billy the Kid, the death of Mussolini, the earthquake in San Francisco, the completion of the transcontinental railroad, the opening of the St. Louis World's Fair.

HELEN CLAPESATTLE · *The Mayos in Action*

There was as much to be heard as seen in a Mayo clinic, for the brothers accompanied their operations with a running clinical commentary, reviewing the case history and the diagnosis, describing the conditions they found, and explaining what they did and why. In these talks they ranged through the whole of medical science, literature, and history, giving freely the convictions born of their wide reading and experience, and, according to one listener, bringing out "points in surgical anatomy and physiology in a way so plain and forceful that one marvels at the barrenness of textbook literature on such matters."

At the operating table they illustrated with unforgettable object lessons the principles of differential diagnosis, antemortem pathology, and early surgery that filled their formal papers. No man could attend Dr. Will's clinics very often without witnessing such a demonstration as this: The history, read by the assistant while the anesthetic was given, was a classic one of "stomach trouble"—years of treatment for indigestion without relief—yet when incision brought the stomach into view it looked perfectly normal.

"You have heard the history, gentlemen, but you see this stomach. In my opinion there is nothing wrong with it; the trouble is somewhere else. If I am right in a few minutes you will notice a

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—From *The Doctors Mayo* by Helen Clapesattle, University of Minnesota Press, 1941. Reprinted by permission of the University of Minnesota Press.

spasm of the pylorus." Shortly a spasm of the pyloric muscles was evident to all.

"That does not tell us where the trouble is, but it is not in the stomach. I will see if it is in the appendix." And he pulled into view a badly diseased appendix.

Then as he proceeded to remove the appendix and close the abdomen he told them of his own experience. Thinking that the pylorospasm in connection with a history of stomach pain meant something functionally wrong with the stomach, he had performed gastroenterostomy in several cases with no relief of symptoms, but when he reoperated and took out a bad appendix or gallbladder the symptoms vanished. He had learned the lesson, but he was still undoing many a gastroenterostomy some other surgeon had lately done for stomach trouble that was not in the stomach. The next day the men might watch him undo just such a gastroenterostomy, or they might see him operate on a "dyspeptic" who had a normal stomach but a gallbladder full of stones.

Such lessons went home as they would in no amount of public speaking without demonstration, so that soon a paper on stomach or gallbladder disease at any medical meeting was likely to call forth a flock of stories beginning "The first time I understood . . . was when I saw Dr. Will Mayo in his clinic. . . ." Dr. Ernest Hall of British Columbia did not exaggerate when he wrote:

> We are enjoying at the Mayos' clinic the third revelation within the history of the present generation of surgeons. Thirty years ago Birmingham dispelled the fallacy of pelvic cellulitis, and in its place gave us a new pathology of pus tubes. Twenty years ago America put inflammation of the bowels out of business, and gave us the interesting appendix to juggle with; and today catarrh of the stomach and chronic dyspepsia, through the genius of Dr. Will Mayo, are fast becoming matters of history, and in their place he is giving us a pathology of organic stomach, liver, and duodenal disease as definite and accurate as that which we possess of the lower abdomen. What Lawson Tait was to the pelvis, Will Mayo is to the upper abdomen.

Dr. Charlie was working in too many fields to have yet attained such an outstanding position in any one, but he was fast rising to the fore in thyroid surgery, and visitors noted it. Dr.

Andrew Smith of Portland, Oregon, vice-president of the American Medical Association, reported to the Surgeons Club one day that Dr. C. H. Mayo had that morning "dissected and shelled out two cysts of the thyroid with such ease that it seemed very simple. The cysts seemed to *roll out*," in great contrast, said Dr. Smith, to a similar case he had seen elsewhere not long before, in which the patient had almost bled to death. Dr. Will saw what was coming and once remarked to Dr. William D. Haggard, professor of surgery at Vanderbilt University in Nashville, "Charlie is going to be the Kocher of America."

As a clinical speaker Dr. Charlie was surely unique. He "kept his audience in a bubble of anticipation. During the morning's work of anything from ten to fifteen major cases he might discuss the number of nails and match-heads, the weight of charcoal and gunpowder which could be made from the constituents of the human body; he might philosophize about the gallbladder of the pocket gopher, the pineal eye of the tuatara lizard, the galls on his oak trees, the tuberculous lesions of turkey's livers, or a hundred other odd subjects, and between these divagations introduce sound clinical teaching drawn from the accumulated wisdom of his vast experience. Those who listened . . . fascinated by his extraordinary discourse never knew what curious information his wide reading and shrewd observation would bring to light."

Both brothers had a gift for putting things so they stuck in the hearer's mind and he went away quoting the "maxims" of the Mayos. Dr. Charlie's forte was description through homely analogy. "Don't remove the parathyroid. It looks like a piece of fat, somewhat harder, and is about the size of a lima bean," he would say. Or, "When the hatchet-sharp edge of the liver is gone, you had better take out the gallbladder." Those who heard that had seen the normal liver many times, but they had never seen its edge as hatchet-sharp until Dr. Charlie saw it for them.

Dr. Will's gift was for an almost epigrammatic conciseness. "Don't monkey with the ovary; either remove it or leave it alone." "In obstruction a silent belly is a septic belly. The bowels are paralyzed and the case is inoperable." "Forty per cent of 'gastric' ulcers are in the duodenum." "Draw your conclusions before your experience is large. . . . Those of large experience are wary of conclusions." "Always report the postmortem findings; for if there is a lesson to be taught it is right that it should travel as far as possible."

Grateful as they were for the instruction, many visitors wondered how the surgeons stood the strain of giving it. A verbatim report of either brother's daily clinical talk runs to fifteen or twenty printed pages, and all the while they talked they were "working placidly yet rapidly . . . cutting, sewing, ligating, and performing all the manipulations of surgical technique."

The Mayos were not brilliant surgeons in the sense in which that term had been applied in earlier years; they did not dazzle their audience with a display of speed, daring, and flourish. But surgeons no longer asked to be thrilled by a spectacular performance. The principles of Halsted were coming into their own, and sureness, soundness, and thoroughness were now more generally respected than brilliance. Of these saner qualities the Mayos had a large share, with the added polish and mastery of technique they had acquired with long practice.

One day an onlooker asked Dr. Will how he had done the operation he had just finished. After thinking a few seconds Dr. Will replied, "Well, I hardly know myself until I go home and look it up in Binnie." Dr. J. Fairbairn Binnie, a Scotsman who had transferred his practice from Aberdeen to Kansas City, had just published a manual of surgery in which the technique of operation after operation was described precisely as the author had seen it done in one of the Mayos' clinics. So the audience that morning greeted Dr. Will's remark with delight, thinking it a sally at Binnie, who was in the group. But it may not have been so. Like all skilled craftsmen, the Mayos had mastered their techniques till they could use them almost without thinking, leaving their minds free for the more important questions of which to use and when.

Their surgery was, in the words of one who studied it, "the essence of the techniques of all masters of surgery, enriched with the original ideas of the Mayo brothers." They did not claim to be original very often; they were more concerned that they should know and practice the very best methods available, no matter who had discovered them. To repeat Dr. Will's fine figure of speech, they were gathering good ideas from every source, tying them into practical bundles for which they provided the string, and demonstrating the use of the bundle to all who wished to learn it.

Those functions they rightly considered about as important for the advance of surgery and the better care of the sick as the function of discovery itself.

Both men were perfectly frank about their role, constantly telling visitors where they had picked up this good thing or that. Sometimes it was from their father, often from Joseph Price, Ochsner, Murphy, or Halsted. "I used to do this differently, but Moynihan showed me his method when he was here and it was better, so I use it now," Dr. Will would say. And Dr. Charlie, "The first time I tried this operation I got stuck at this point, but Dr. George Monk of Boston was here and he told me what to do."

Many of their listeners, more used to the kind of man who "invented" some good method or instrument he had seen used in Europe, were humbled by the Mayos' simple honesty. When they spoke to the brothers about it or complimented them on their constant efforts to keep on learning from other surgeons, the answer was merely an echo from the Old Doctor: "No man is big enough to be independent of others." Or Dr. Charlie would cite the European surgeon who was doing several hundred abdominal operations a year but who never bothered to see or read what others were doing, so that he was proud of a mortality of sixteen per cent when others had reduced it to three.

Dr. Will and Dr. Charlie pretended to infallibility no more than they did to originality. In some American clinics the morning schedule would list several "abdominal operations," a vagueness that permitted the surgeon to make sure of his diagnosis while the assistant was reading the case history. The Mayos always listed a specific diagnosis, or if they had been unable to reach one they admitted it with "Explore stomach, duodenum, and gallbladder." If their diagnosis proved wrong they called for a rereading of the history and in the presence of their visitors, and sometimes with their aid, tried to discover what had led them astray.

Some surgeons, notably John B. Murphy, saved the difficult operations for doing in private, but every visitor was welcome to see any operation the Mayos did and learn from the hard luck as well as the good. Often the master was most fully revealed when things went wrong. Among Dr. W. J. Mayo's outstanding characteristics as a surgeon, next to his remarkable judgment as to how far he could go in an operation—when to go in and when to get out—was his imperturbability in a crisis.

One day he was removing a tumor of the kidney. As an upheaval of the ocean floor might render useless the navigator's charts, so the huge growth had pushed all the familiar surgical landmarks out of place and attached itself to the adjoining body parts. As Dr. Will lifted it to the surface, the largest vein in the body was ruptured; blood welled forth in a horrifying flow that would have ended life in a few minutes.

With one flash of his finger Dr. Mayo found and plugged the rent, entirely by his trained sense of touch, for the blood shut everything else from sight.

Then he said quietly to the tense watchers, "Gentlemen, I have torn the *vena cava* and it will be necessary to make another incision to repair the vein."

He stitched up the tear, made sure it was tight, and then went calmly on with the task of cutting the growth away from the tissues to which it was attached. Suddenly the tumor came loose, making a long tear in the bowel. Dr. Mayo continued talking: "This, gentlemen, is a much more serious accident than the injury to the vein. I have torn a long rent in the duodenum and if it is not made intact, the contents will leak out and the patient will live but a few days." Then slowly and carefully he sutured the torn bowel before he went on to complete the work on the kidney.

The operation took three and a half hours. At the end the spectators were exhausted by the strain and stared in awe at the outwardly unperturbed man who had carried the responsibility.

Either accident would have meant death in the hands of the average surgeon, so the men naturally watched the postoperative course of the case with great interest. There were no complications, no signs of shock, and the patient progressed smoothly to a complete recovery.

Asked one time to compare the two Mayos as surgeons, Dr. Haggard replied, "Dr. Will is a wonderful surgeon; Dr. Charlie is a surgical wonder." The amazing characteristics in Dr. Charlie were his versatility and ingenuity. Other surgeons could not get over the ease with which he turned from removing a thyroid in one case to taking out a prostate or a varicose vein in the next, always with admirable skill. To him was due the range of surgery at Rochester, which made it possible for one man to say, "If you stay here long enough you can see every operation known to surgery."

His ingenuity in devising operative procedures for the unusual case became a byword in the profession. The fellows of the American Surgical Association met in Rochester one year, and wanting to see Dr. Charlie's peculiar talent in action, they asked Dr. Will to select some difficult case that Charlie had not examined and let them see what he did with it. As Dr. Will told the story:

"I chose the case of a woman who had been operated on seven times before coming here, and whose condition was apparently hopeless of surgical repair, and had the Fellows examine her. They all agreed that it was a case hopeless of relief, and so the whole crowd was prepared to see Charlie floored. The patient was placed before him, and when he looked at the ghastly postoperative results he whistled. Then, without apparent effort, he outlined an entirely new plan of operative treatment, which was successful, and the crowd of doctors was simply dazed."

Writing

> Present an account of an expert at work in a field which interests you: a mother managing her children, a soil-conservationist surveying a farm with the owner, a merchant running a sale, a mechanic checking and repairing the motor of an automobile, or the like.

ALBERT BIGELOW PAINE · *Mark Twain Becomes a Cub Pilot*

Mississippi River piloting in [Sam Clemens' youth] was a regal occupation. The pilot was a law unto himself; his direction of the boat was absolute. He could land the boat or lay it up when he chose. If he consulted the captain it was merely a matter of courtesy. He could, if he thought proper, take the boat into what

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—From *A Short Life of Mark Twain*, by Albert Bigelow Paine. Copyright, 1920, by Harper & Brothers.

seemed certain destruction, and the captain was obliged to stand by, helpless and silent, for the pilot had all the law on his side.

Furthermore, the pilot was a gentleman. His work was clean and physically light. It ended the instant the boat was tied to the landing, and did not begin again until it was ready to back into the stream. His salary for those days was princely—the Vice-President of the United States received no more. As for prestige, the Mississippi pilot, perched high in his glass inclosure, smartly dressed and commanding all below him, was the most conspicuous, the most observed and envied personage in the world. No wonder Sam Clemens, with his love of the river and his boyish fondness for distinction, aspired to that stately office. He knew—he must have known—something of the great task he had undertaken: that of learning twelve hundred miles of a shifting river, with its countless snags and shoals and caving banks; to become as familiar with it by night or by day as the hallway in his own home. He was willing to undertake that giant task, knowing that it would be hard, though we may believe he had never realized its full magnitude. Nobody could grasp that—not till afterward.

On the way up the river Bixby[1] had begun to give him instructions. In the Mississippi book the author tells of this in his delightful fashion.[2] The reader cannot do better than to look up those early chapters, for it would be hopeless to attempt a proper summary of them here. There is an element of fiction in them, of course. But without doubt they present the aspect and the substance of truth. Bixby was a small man, hot and quick firing, though kindly, too, and gentle, when he had blown off. Just one brief example of his teaching methods. He had been casually naming the points and crossings during the afternoon, and some hours later, on the night watch he began an examination to test the memory of his apprentice. Apparently Sam had forgotten everything. Finally Bixby asked:

> "Look here! What do you start from, above Twelve-Mile Point, to cross over?"
>
> "I—I—don't know."
>
> "You—you—don't know," mimicking my drawling manner of speech. "What *do* you know?"

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[1] Horace Bixby, a young riverboat pilot. [Editors' note.]

[2] Mark Twain's *Life on the Mississippi.* [Editors' note.]

> "I—I—nothing for certain."
>
> Bixby exploded and said a number of severe things. Then:
>
> "Look here, what do you suppose I told you the names of those points for?"
>
> I tremblingly considered a moment—then the devil of temptation provoked me to say, "Well—to—to—be entertaining, I thought."
>
> This was a red flag to the bull. He raged and stormed so (he was crossing the river at the time) that I judged it made him blind, because he ran over the steering-oar of a trading-scow. Of course the traders set up a volley of red-hot profanity. Never was a man so grateful as Mr. Bixby was, because he was brimful, and here were subjects who could *talk back.* He threw open a window, thrust his head out, and such an eruption followed as I had never heard before. The fainter and farther away the scow-men's curses drifted, the higher Mr. Bixby lifted his voice and the weightier his adjectives grew. When he closed the window he was empty. You could have drawn a seine through his system and not caught curses enough to disturb your mother with. Presently he said to me, in the gentlest way: "My boy, you must get a little memorandum book, and every time I tell you a thing put it down, right away. There's only one way to be a pilot and that is to get this entire river by heart. You have to know it just like A–B–C."

Sam Clemens bought the little book, at the next stop, and presently it "fairly bristled" with the names of towns, points, bars, islands, bends, and reaches, but it made his heart ache to think that he had only half these things set down, for as the watches were four hours off and four hours on, there were long gaps between during which he had slept. The little notebook still exists, its neat, tiny entries still telling the story of that first trip. And those long four-hour gaps where he had been asleep, they are still there, and somehow the old heartache is still in them. Mark Twain, easy-going, dreamy, impractical, as he appeared in later years, must have loved the river and the prestige and independence of the pilot's life, to have persisted against all discouragement in the work he had undertaken. . . .

In time Samuel Clemens accumulated a store of river knowledge, and this was not all. He learned human nature there. As the streets of Hannibal had taught him life in an earlier day, so the great water highway contributed a fund of human knowledge. Steamboat men were never celebrated for their fastidiousness. The mate and the deck hand were the direct descendants of the old keel-boat men of the earliest river navigation. Captains and pilots were of grand estate, but they were not angels. Sam Clemens broadened his vocabulary on the river, and if its additions were not always polite, and if he did not always sift the quality of his wit, we should understand that he was an extreme example of a human being in the making. In one place he writes:

> In that brief, sharp schooling I got personally and familiarly acquainted with all the different types of human nature that are to be found in fiction, biography, or history.

Certainly life was a great school for Mark Twain. We may be thankful that it was just what it was—and no more.

The demands of the Missouri River trade took Horace Bixby away from the Mississippi for a time, and, according to custom, he turned his pupil over to the pilot of the *John J. Roe*. The *Roe* was a very deliberate freight boat, owned and conducted by farmers, but of unbounded hospitality and comfort. She was not licensed to carry passengers, but always had a dozen "family guests" aboard, and was the jolliest boat imaginable. Sam Clemens was in heaven on that slow-going, delightful craft, and then by contrast he entered a period of inferno. Bixby returned, made a trip or two, then left, having transferred him again, this time to a man named Brown. Brown was a pilot on the fine new steamer *Pennsylvania,* one of the handsomest boats on the river. Young Clemens was by this time a good steersman, and Bixby probably thought it fortunate to find for him such a berth.

But Brown proved a disappointment. He was illiterate, faultfinding, tyrannical, and vindictive. He took a dislike to Sam, who was none of these things, and the young man despised him almost from the start. He made an effort to please his chief but to no purpose. Brown nagged him continually. No matter how well Sam was doing at the wheel, Brown would snarl out:

"Here, where you going, now? Pull her *down*, pull her *down*, do you *hear* me? Dod-durned mudcat!" Sam found it hard to restrain himself from doing violence to Brown. In the Mississippi book he writes:

> I could imagine myself killing Brown; there was no law against that, and that was the thing I always used to do the moment I was abed. Instead of going over my river in my mind, as was my duty, I threw business aside for pleasure, and killed Brown. I killed Brown every night for a month; not in old, stale, commonplace ways, but in new and picturesque ones.

He tried to be respectful to Brown. Custom, even the law, required that. But occasionally temptation led him almost to the verge of impertinence. One day they were steaming up the river when the pilot noticed that the boat seemed to be taking an unusual course.

"Here," he yelled, "what you heading for now? What in nation you steering at, anyway? *Durn numskull!*"

"Why," Sam drawled, placidly, "I didn't see much else I could steer for, so I was heading for that white heifer on the bank."

The young man, though by this time accounted a good steersman, was receiving no wages. He had been on the river a year, but it would be several months yet before he could obtain a pilot's license. Meantime there was need of money and his savings were exhausted. The *Pennsylvania* made a round trip in about thirty-five days, with a day or two of idle time at either end. Sam found he could earn two or three dollars a night watching freight on the New Orleans levee. Long afterward he said:

"It was a desolate experience, watching there in the dark among those piles of freight; not a sound, not a living creature astir. But it was not a profitless one. I used to have inspirations, as I sat there alone, those nights. I used to imagine all sort of situations and possibilities. Those things got into my books by and by, and furnished me with many a chapter. I can trace the effects of those nights through most of my books, in one way and another."

Even with Brown, piloting had its pleasant features. In a letter which Sam wrote to his sister he tells of a stirring night adventure in the running ice when he and others of the crew went out in the yawl to take soundings. The excitement and danger of an undertaking like this were the sort of thing that the boy who had been Tom Sawyer would love. In the same letter he speaks of his brother Henry, for whom he has found a small clerkship on the *Pennsylvania.* It is the first word of that tragic episode which saddened Samuel Clemens's early years and left its mark upon his life. Henry Clemens at this time was twenty years old, a handsome, gentle boy. Sam was lavishly fond and proud of him. He became third clerk on the *Pennsylvania,* and it was a great comfort to have him along. The naggings of Brown seemed easier to bear.

The relief was brief enough. The *Pennsylvania* was on the way down the river, one morning, when Henry appeared on the hurricane deck to bring notice from the captain of a landing to be made somewhat lower down. Brown was rather deaf, but would never confess it. Very likely he did not understand the order. He paid no attention to Henry, and when he was opposite the landing went straight ahead. The captain, whose name was Klinefelter, appeared on the deck and called to him.

"Didn't Henry tell you to land here?"

"No, sir."

Captain Klinefelter turned to Sam, "Didn't you hear him?"

"Yes, sir."

Brown said: "Shut your mouth. You never heard anything of the kind."

Below the landing, Henry came into the pilot house, unaware of any trouble. Brown in his ugliest manner said:

"Here, why didn't you tell me we had got to land at that plantation?"

Henry said, respectfully, "I did tell you, Mr. Brown."

"It's a lie."

Sam Clemens flamed up: "You lie yourself. He did tell you."

Brown was dazed for a moment; then he shouted, "I'll attend to your case in half a minute." And to Henry, "You get out of here."

The boy had started, when Brown suddenly seized him by the collar and struck him in the face. Instantly Sam was upon Brown with a heavy stool and stretched him on the floor. Then all the accumulated indignation possessed the young man, and, leaping upon Brown and holding him with his knees, he pounded him with his fists until his strength and fury were exhausted. Brown, finding himself free, sprang with pilot instinct to the wheel, for the boat had been drifting. Seeing there was no danger, he seized a spyglass as a weapon.

"Get out of this here pilot house," he raged.

But Sam lingered and calmly corrected Brown's English. He felt that nothing could make matters worse. He would probably be hanged for mutiny, as it was.

"You should leave out the 'here,'" he drawled; "it is understood, and not considered good English form."

"Don't you give me none of your airs; I ain't going to stand nothing more from you."

"You should say, 'Don't give me *any* of your airs,'" Sam commented, "and the last half of your sentence almost defies correction."

A group of passengers and white-aproned servants had assembled on the forward deck and applauded the conqueror. Sam left Brown raging and went below to find Captain Klinefelter. He expected to be put in irons. The captain took him into his private room and closed the door. He looked at the culprit thoughtfully.

> "Did you strike him first?" he asked.
> "Yes, sir."
> "What with."
> "A stool, sir."
> "Hard?"
> "Middling, sir."
> "Did you knock him down?"
> "He—he fell, sir."
> "Did you follow it up? Did you do anything further?"
> "Yes, sir."
> "What did you do?"
> "Pounded him, sir."
> "Pounded him?"
> "Yes, sir."
> "Did you pound him much—that is, severely?"
> "One might call it that, sir, maybe."
>
> "I am deuced glad of it! Hark ye, never mention that I said that. You have been guilty of a great crime; and don't ever be guilty of it again on this boat, *but*—lay for him ashore! Give him a good sound thrashing. Do you hear? I'll pay the expenses."[1]

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[1] From *Life on the Mississippi.* [Editors' note.]

Sam heard Captain Klinefelter laughing to himself as the door closed behind him.

Brown forbade him the pilot house, swearing he would leave the boat at New Orleans if Sam Clemens remained on it, and Captain Klinefelter told him to go, offering to let Sam run the daylight watches alone. But the young steersman had less confidence, and advised the captain to keep Brown for the up trip. He would follow by another boat, and resume his place when Brown was gone. It was a decision that probably saved his life.

Henry Clemens usually joined his brother during the night watches on the levee, and the two made the rounds chatting together. On the night before the departure of the *Pennsylvania* they spoke of disasters on the river. Sam, who had a vivid and troublesome dream, said, finally:

"In case of accident, whatever you do, don't lose your head. The passengers will do that. Rush for the hurricane deck and the lifeboat and obey the mate's orders. When the boat is launched help the women and children into it. Don't get in yourself. The river is only a mile wide; you can swim ashore easily enough."

Coming up the river on the *A. T. Lacy*, two days behind the *Pennsylvania* and approaching Greenville, Mississippi, Samuel Clemens heard a voice shout from the landing:

"The *Pennsylvania* is blown up, just below Memphis, at Ship Island. One hundred and fifty lives lost."

Farther up the river they received added news, with the names of some of the victims. Henry Clemens was mentioned as being scalded beyond recovery.

All of the reports were true. At six o'clock of a warm mid-June morning, while loading wood sixty miles below Memphis, four out of eight of the *Pennsylvania's* boilers had suddenly exploded, with fearful results. All the forward end of the boat had been blown out. Samuel Clemens found his brother stretched upon a mattress on the floor of an improvised hospital. Henry was one of those who had been blown into the river by the explosion. He had started to swim for the shore, but presently, feeling no pain, had turned back to assist in the rescue of others. What he did after that could not be clearly learned. Perhaps he had really been uninjured at first and had been scalded in his work of rescue. It will never be known. He was terribly injured, and died on the fourth night following the catastrophe. His brother always held himself responsible for the boy's death, and his remorse did not spare him. He never really looked young again. Gray hairs began to come, his face took on that serious, pathetic look which from that time it always had in repose.

Discussion

1. Why does Paine begin with a general account of the life of a river-boat pilot?
2. Point out the specific incidents of Twain's life utilized in the selection. Why were they used?
3. What defect, recognized by Paine, does *Life on the Mississippi* have as a source of biographical information?
4. What do the quotations from *Life on the Mississippi* contribute to the selection?
5. Does the reader gain a definite conception of the young Samuel Clemens? What traits are revealed?
6. Show that the essay follows an order of climax.

Writing

Write a biographical essay limited to a brief but significant part of a man's life; for example, Robert E. Lee as a college president, Babe Ruth as a pitcher, Charlie Chaplin's early career, Herbert Hoover as ex-president, Benjamin Franklin as a scientist.

JOHN RICHARD GREEN · *Elizabeth*

England's one hope lay in the character of her Queen. Elizabeth was now in her twenty-fifth year. Personally she had more than her mother's beauty; her figure was commanding, her face long but queenly and intelligent, her eyes quick and fine. She had grown up amidst the liberal culture of Henry's court, a bold horsewoman, a good shot, a graceful dancer, a skilled musician, and an accomplished scholar. She studied every morning the Greek

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—From *A Short History of the English People*, 1874.

Testament, and followed this by the tragedies of Sophocles or orations of Demosthenes, and could "rub up her rusty Greek" at need to bandy pedantry with a Vice-Chancellor. But she was far from being a mere pedant. The new literature which was springing up around her found constant welcome in her court. She spoke Italian and French as fluently as her mother-tongue. She was familiar with Ariosto and Tasso. Even amidst the affectation and love of anagrams and puerilities which sullied her later years, she listened with delight to the *Faerie Queene,* and found a smile for "Master Spenser" when he appeared in her presence. Her moral temper recalled in its strange contrasts the mixed blood within her veins. She was at once the daughter of Henry and of Anne Boleyn. From her father she inherited her frank and hearty address, her love of popularity and of free intercourse with the people, her dauntless courage and her amazing self-confidence. Her harsh, manlike voice, her impetuous will, her pride, her furious outbursts of anger came to her with her Tudor blood. She rated great nobles as if they were schoolboys; she met the insolence of Essex with a box on the ear; she would break now and then into the gravest deliberations to swear at her ministers like a fishwife. But strangely in contrast with the violent outlines of her Tudor temper stood the sensuous, self-indulgent nature she derived from Anne Boleyn. Splendor and pleasure were with Elizabeth the very air she breathed. Her delight was to move in perpetual progresses from castle to castle through a series of gorgeous pageants, fanciful and extravagant as a caliph's dream. She loved gaiety and laughter and wit. A happy retort or a finished compliment never failed to win her favor. She hoarded jewels. Her dresses were innumerable. Her vanity remained, even to old age, the vanity of a coquette in her teens. No adulation was too fulsome for her, no flattery of her beauty too gross. "To see her was heaven," Hatton told her, "the lack of her was hell." She would play with her rings that her courtiers might note the delicacy of her hands, or dance a coranto that the French ambassador, hidden dexterously behind a curtain, might report her sprightliness to his master. Her levity, her frivolous laughter, her unwomanly jests gave color to a thousand scandals. Her character in fact, like her portraits, was utterly without shade. Of womanly reserve or self-restraint she knew nothing. No instinct of delicacy veiled the voluptuous temper which had broken out in the romps of her girlhood and showed itself almost ostentatiously throughout her later life. Personal beauty in a man was a sure passport to her liking. She patted handsome young squires on the neck when they knelt to kiss her hand, and fondled her "sweet Robin," Lord Leicester, in the face of the court.

It was no wonder that the statesmen whom she outwitted held Elizabeth almost to the last to be little more than a frivolous woman, or that Philip of Spain wondered how "a wanton" could hold in check the policy of the Escurial. But the Elizabeth whom they saw was far from being all of Elizabeth. The wilfulness of Henry, the triviality of Anne Boleyn played over the surface of a nature hard as steel, a temper purely intellectual, the very type of reason untouched by imagination or passion. Luxurious and pleasure-loving as she seemed, Elizabeth lived simply and frugally, and she worked hard. Her vanity and caprice had no weight whatever with her in state affairs. The coquette of the presence-chamber became the coolest and hardest of politicians at the council-board. Fresh from the flattery of her courtiers, she would tolerate no flattery in the closet; she was herself plain and downright of speech with her counsellors, and she looked for a corresponding plainness of speech in return. If any trace of her sex lingered in her actual statesmanship, it was seen in the simplicity and tenacity of purpose that often underlies a woman's fluctuations of feeling. It was this in part which gave her her marked superiority over the statesmen of her time. No nobler group of ministers ever gathered round a council-board than those who gathered round the council-board of Elizabeth. But she was the instrument of none. She listened, she weighed, she used or put by the counsels of each in turn, but her policy as a whole was her own. It was a policy, not of genius, but of good sense. Her aims were simple and obvious: to preserve her throne, to keep England out of war, to restore civil and religious order. Something of womanly caution and timidity perhaps backed the passionless indifference with which she set aside the larger schemes of ambition which were ever opening before her eyes. She was resolute in her refusal of the Low Countries. She rejected with a laugh the offers of the Protestants to make her "head of the religion" and "mistress of the seas." But her amazing success in the end sprang mainly from this wise limitation of her aims. She had a finer sense than any of her counsellors of her real resources; she knew instinctively how far she could go, and what she could do. Her cold, critical intellect was never swayed by enthusiasm or by panic either to exaggerate or to underestimate her risks or her power.

Discussion

1. Divide the selection into three main parts. Show that these are arranged in order of climax.
2. Indicate exactly what part of the essay contrasts the traits inherited from Henry VIII with those inherited from Anne Boleyn. What is the effect of telling us last about those traits not obviously inherited from either of her parents?
3. With the help of the context, give the meanings of the following phrases. All are from the first paragraph.
   amidst the affectation and love of anagrams and puerilities; moral temper; a caliph's dream; no adulation was too fulsome, no flattery of the queen too gross; voluptuous temper.
4. Comment on the diction and the general style. Is the writing formal, informal, difficult, simple? Is the author much concerned with grace of expression, or does he concentrate rather exclusively on the substance of his observations?
5. Find applications of four rules of punctuation in the first paragraph.

STUART CHASE · *The Rise and Fall of the Great Bottle Trust*

On a momentous day some 50 years ago, a glass blower named Michael J. Owens started up a clumsy machine which looked like a many-armed octopus. The arms reached down into a vat, sucked up charges of molten glass and fed them into the machine. In due course a line of bottles came out the other end. For the first time in history a glass bottle had been made by completely automatic means. As far as bottles were concerned, the days of the skilled glass blower, with his puffed-out cheeks and swinging pipe, were numbered.

—From *The Reader's Digest*, December, 1947, reprinted by permission of *The Reader's Digest.*

By 1904, the Owens Company was building and leasing suction machines to other concerns under protection of patents. The patent law did not contemplate, however, a monopoly which would swell and grow and gobble up competitors to such an extent that some 40 years later a Supreme Court Justice could declare: "The history of this country has perhaps never witnessed a more completely successful economic tyranny over any field of industry."

It was obvious from the start that a relatively few automatic machines, working 24 hours a day and never tiring, could supply the whole country with bottles. Here was power and potential wealth to stagger the imagination! But someone's imagination was strong enough to foresee a further development—a legal machine to control the metal ones. Whoever could hold possession of all the bottlemaking inventions, present and future, could run the glass business the way Mayor Hague ran Jersey City. After some preliminary sparring, three major concerns got together to do just this.

Remember the names: Owens, Corning and Hartford.

Exit the Glass Blower

Glass is made of common materials. Sand is heated with lime and soda until it has the consistency of hot candy. To transform this sticky, dull-red mass into a milk bottle or a fruit jar is a formidable operation. Since time out of mind glass blowers—usually in teams of three—had thrust a long blowpipe into the melt, snatched a gob of the hot candy, swung it around in a glowing arc, blown a bit, swung some more, blown some more—and behold! a bottle.

Experts might make as many as 800 bottles in a day. The early Owens machine made 30,000 in 24 hours. A fast worker with an assistant could blow 1200 electric light bulbs in eight hours. Not many years later a machine developed at the Corning Glass Works was tossing off 500 bulbs a minute, 750,000 a day—more than the men could blow in two years!

Soon the Owens machine had competitors. The Corning Glass Works began to develop automatic glass blowers. And about 1910, engineers in Hartford, Conn., financed by some bottlemakers, began work on a machine which looked something like a streamlined oil burner, and was called, somewhat inelegantly, a "gob feeder." Instead of tentacles reaching into the melt and sucking it out, the gob feeder extruded molten glass in large drops approximating the final size of the bottle. Automatic shears snipped off the gobs and dropped each in a mold. To exploit this invention a new company was formed, Hartford-Fairmont.

Glass containers—such as grocery-store bottles, drugstore bottles, liquor and beer bottles, milk bottles, canning jars—account for about half of all glass produced.

In 1899, glassmakers blew about a billion containers. By 1935, machines were blowing nearly six billion. It required 28,000 wage earners to produce the 1899 output; but in 1935 only 24,000 workers were needed. They were mostly machine tenders, not blowers.

One final and most important statistic. At the turn of the century there were 155 concerns making glass containers. In 1937, there were only about 40, of which *five did two thirds of the American business.*

Output way up, number of companies way down, workers down a little, output per worker nearly six times as great. On this backbone of invention and mechanical development, the great Bottle Trust arose.

The Rise and Fall of Competition

By 1916, Owens, Corning and Hartford-Fairmont were all in each other's hair. Their processes and patents were colliding at many points. "The industry is pretty well demoralized by competition," said the people at Hartford in a memorandum.

Small glassware manufacturers might be free and happy, but not Hartford, and not Corning. Why not get together for some constructive action? When competing businessmen begin to talk about "constructive action," the chances are they will not compete much longer. The two companies went into a huddle and emerged with some very constructive action indeed.

Their trial marriage worked so well that six years later, in 1922, they decided on a formal ceremony blessed by the State. The Hartford-Empire Company was formed to replace both the old Hartford-Fairmont and the old Empire Machine Company which Corning executives had founded in 1910. The Hartford people agreed not to make or distribute bulb machines; Corning agreed to stay out of the gob-feeder field. They pooled their patents, divided as much of the field as they could control, and put an end to competition and price cutting. All strictly contrary to the antitrust laws.

Hartford-Empire chose not to make or sell anything, and confined itself to three important functions:

1. To run the patent pool and control, so far as possible, the companies that manufactured glass containers. This function came to be called "The Hartford Umbrella."
2. To operate a research laboratory for developing and servicing machines.
3. To order machines to be built by another company, and then to lease them to bottlemakers—but only to those who were under "the umbrella."

The Great Blitz

So far so good. A solid foundation had been laid. But there were other giants in the field and many independents, making not only bottles but machinery. The biggest giant was Owens.

The Owens people had long feared the gob feeder, even as Hartford-Empire feared the Owens suction feeder. The two began warily to fence. Owens instituted a suit for infringement against one of Hartford's licensees. Should Hartford fight back? The glass industry waited in suspense.

The two companies, however, were governed by realism. In the eloquent words of a Government report, they "took a long look at the hazardous competitive way ahead, another at the richness of the prize to be won—and decided to divide the spoils." They signed a number of fancy cross-licensing agreements, surrendered their local umbrellas in favor of one big umbrella for the whole country, and assigned nice dry spots under the umbrella to deserving small fry. Owens was guaranteed a large share of Hartford-Empire's income. It cost money to get Owens into the fold, but it was not money lost. The arrangement was to prove enormously profitable.

There remained some manufacturers who were not under the umbrella, and some outside inventors who dared to have ideas about bottlemaking machinery. A blitzkrieg was organized against them. As a luckless independent was told: "It is our plan that nobody in the glass industry is going to be allowed to own one piece of equipment." Except, of course, the insiders.

There never was any doubt about the outcome. Two makers of competing machines—Tucker and W. J. Miller—were overwhelmed. A few years later Hazel-Atlas, chief competitor of Owens, was brought to heel, and assigned its place in the empire. In 1933, Ball Brothers, the great fruit-jar makers of Muncie, Ind., were "brought into the fold." The Balls agreed to pay royalties to Hartford on inventions for which the Balls said they had no use, and in return were protected against any other fruit-jar makers invading their domain. Other companies, big and small, were knocked over.

A dozen years after it was founded, Hartford-Empire reigned supreme. With three courageous exceptions, every glass-container maker was either in the Party, in a concentration camp, or in the graveyard. Every significant invention in glass-container-making machinery was closely controlled. Ninety-seven per cent of the business was being done under the umbrella. Two of the three independents were being sued by Hartford for infringement, and presumably their days were numbered.

Deep in the Heart of Texas

Put yourself in the place of an independent—for instance, Mr. S. A. Coleman. He had a small company making milk bottles in Santa Anna, Texas.

Shortly after starting operations he received a letter from Hartford-Empire notifying him that he was infringing patents. He was invited to Hartford to talk things over. He went. He got nowhere. Hartford simply wouldn't consider licensing him.

Mr. Coleman told Hartford, "In Texas I have seen men hanging in trees for doing less than what the Hartford-Empire is trying to do to my small company."

Soon he was sued. Awed by "a half trainload of attorneys and equipment—motion-picture projectors and attorneys all over the place"—Coleman asked for a recess until afternoon, to see if the case could be settled out of court. He settled, receiving $10,000 in cash and a six months' license. At the end of that time he was to ship his bottle machines back to the Hartford-Empire Co.

Mr. Coleman's trouble was that he had collided with Hartford's arrangements for the Texas territory. Note, however, how mercifully he was put to death, with six months to linger and $10,000 in cash.

How the Monopoly Worked

If your conversations at Hartford were happier than this, and you were permitted to become a licensee, your freedom as an independent businessman vanished. You were told what kind of bottles you could make, how many you could make, where you could make them, how long you could go on making them. And no back talk.

According to a Government report, one company was allowed to make only blue glass containers; another only opal-colored products; a third was held to containers for mayonnaise, peanut butter, preserves, syrup and honey; while a fourth could not make any container weighing more than 82 ounces. Still another company could make only bottles for castor oil and turpentine.

Now suppose you are an outsider with a little capital; you like the glassware business and want to enter it. You must have machines, of course, and you inquire about leasing them. Thereupon you are referred to what might be called Hartford's "admissions committee." You find that the committee takes an exceedingly dim view of the admission of newcomers. In periods when capacity was in excess of demand it is doubtful if Abraham Lincoln could have got in.

Hartford controlled patents not only on machines which had been made but also on machines which were still dreams. A memorandum found in the files underlined this policy in no uncertain terms: "To secure patents on possible improvements of competing machines, so as to 'fence in' those and prevent their reaching an improved stage." A competitor might set out for the Patent Office one fine day, with a song on his lips and the patent application for an improvement in his pocket. The next thing he knew, however, he would be flat on his face, tripped up by Hartford's fence.

Advantage was taken of the opportunity for delays inherent in patent procedure to postpone for years the issuing of a final grant. One basic patent, for which initial application was made in 1910, did not emerge from the Patent Office until 1937. Add the 17 years of a patent's life, and it was good until 1954!

One result of the Hartford-Empire case was an amendment to the patent law preventing such delays.

The Authoritarian State

When the blitz ended, in the '30's, the glass-container industry was completely controlled by Hartford. One did not need to look to Germany or Italy or Russia to study a planned economy. One could find it right at home in the glass-container business.

Were there any compensating considerations? Yes, output had gone up and the price of bottles had come down. Bankruptcies in the industry were rare. Technological processes had advanced. Perhaps they would have advanced faster under free enterprise, but they did not stand still.

Indeed, the monopoly contended that the potential output of its machines was so great that, without a planned economy to control the output, overproduction and unemployment would have been inevitable. This defense may or may not have merit, but it is beside the point. Free competitive markets are the law of the land, except where the State has declared an industry "affected with a public interest," and stepped in to regulate it as a public utility. Examples: water, gas, power, the telephones, the railroads. The glass business has *not* been declared a public utility, and competition accordingly is its only legal way of life.

Humpty Dumpty Had a Great Fall

The rest of our story is soon told. In 1939 the United States brought suit against Hartford-Empire and the insiders under our antitrust laws. After a long and costly trial, Judge Kloeb of the Federal District Court in Toledo, Ohio, wrote a scathing opinion. He found most of the defendants guilty of monopoly and conspiracy, and ordered Hartford into temporary receivership, pending "relief" for the industry.

Hartford appealed to the Supreme Court. In 1945 the Court upheld Judge Kloeb on every count, but modified some of his plans for relief. What should the final remedy be?

On the major issue the Supreme Court was adamant. Hartford would have to lease its machinery to any applicant to manufacture any glass product anywhere in the United States in any quantity for a "reasonable" royalty. This made legal history. For the first time, the Supreme Court had held that the owner of a patent, when found guilty of antitrust violations, could be *compelled* to license his patent at a fair price.

After long negotiations, all parties had agreed as follows:

1. Hartford-Empire henceforth will sell its machines outright to those who want to own them.

2. Bottle manufacturers may build their own machines, or have them built by independent machinery manufacturers, upon payment of a "reasonable" royalty to Hartford.

These agreements drain off the patent pool and tear down the "fences." The monopoly, so far as it is based on patents, is destroyed.

Free Enterprise or Monopoly?

Glass is not the only industry where more free enterprise might help the independent businessman, especially the newcomer. The Department of Justice has suits for relief pending against alleged monopolies in such things as aluminum, nickel, eyeglasses, washing machines. But Congress has always starved the Antitrust Division for funds. The trusts have legal talent by the trainload, and spare no expense to maintain their position—as Mr. Coleman found out when Hartford came to Texas.

The case of Hartford-Empire shows how far the nation is in practice from the ideal of free enterprise. Indeed, our whole business structure is pitted with monopolies and agreements in restraint of trade. We should support the Antitrust Division to the limit in its efforts to break up the vicious ones.

Discussion

1. To what extent is the article mere reporting of facts, to what extent an argument—a defense of anti-trust laws?
2. Why does Chase call the monopoly an example of controlled economy (p. 297)? What was the source of the power of the glass monopoly? What good was achieved by the monopoly?

LOUIS TAYLOR MERRILL · *Mill Town on the Merrimack*

Cannon were booming, drums beating, banners flying, handkerchiefs waving, and President Andrew Jackson's flaunting mane waved, too, as he doffed his hat to the acclaim of the citizens of Lowell, Massachusetts, gathered to do him honor one fine June morning in 1833. The president, fresh from his investiture at Harvard with an honorary doctorate of laws, was touring politically hostile Yankeeland. Down the street they paraded him, down a mile-long avenue lined with "liveried angels clothed in white,"[1] belted with blue sashes[2] and (in place of the flying apparatus real angels wear) carrying green-fringed parasols. The exhilarating experience of being made the target of thousands of dazzling smiles and arch glances shot out from under the green-fringed parasols moved the chivalrous old hero almost as much as the barrage of British bullets that shrilled past his head at the Battle of New Orleans.

"By the Eternal," exclaimed the delighted Old Hickory, "they are very pretty women!"

And the poet Whittier, whose bachelor heart we may surmise to have been less impressionable, was lifted in aeronautic rhapsody, in contemplating "acres of girlhood—beauty by the square rod, or miles by long measure!"

> The young, the graceful, the gay—flowers gathered from a thousand hill-sides and green valleys of New England; fair unveiled Nuns of Industry; Sisters of Thrift; and are ye not also Sisters of Charity, dispensing comfort and hope and hap-

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— From *The New England Quarterly*, March, 1946, reprinted by permission of *The New England Quarterly* and Louis Taylor Merrill.

[1] Charles Cowley, *Handbook of Business in Lowell, With a History of the City* (Lowell, 1856), 96. [Notes throughout this essay are author's.]

[2] Benjamin F. Butler, *Butler's Book: Autobiography and Personal Reminiscences* (Boston, 1892), 90. The girls of one mill varied the color scheme by wearing black sashes, in token of mourning for their mill manager who had recently died.

> piness around many a hearth-stone of your native hills, making sad faces cheerful, and hallowing age and poverty with the sunshine of your youth and love? Who shall sneer at your calling? Who shall count your vocation other than noble and ennobling? [3]

As a matter of fact there were some—not living on the flighty peak of Parnassus—who were minded to puncture the poet's apostrophes. These observers saw in the host of pie-fed angels and virgin vestals of the religion of industry (with its "gospel," according to Whittier, "preached daily . . . from some thirty temples; its mighty sermons uttered by steam and water power; its music the everlasting jar of Mechanism, and the organ swell of many waters") a batch of "degraded females . . . dragging out a daily life of slavery and wretchedness," sweated and exploited with long hours of labor to fatten the twenty per cent dividends of Yankee Croesuses. Such at least was the dissenting view of a contemporary labor leader.[4]

Carpings of such critics were, of course, drowned in the general paeans of praise for the Lowell factory system, that mingled pleasingly with the "everlasting music" [5] of the "temples" of toil with their thousand priests and thousands of priestesses ministering around their spinning jennies [again according to Whittier] or "whitening the long unshaded streets in the level light of sunset."

Sun-blinded like the poet, most visitors to Lowell enjoyed the "music of the temples," noted with satisfaction the vine-clad walls and well-scrubbed stairs of these factory fanes and read approvingly the sketches produced by a handful of factory girls with literary inclinations in the *Lowell Offering*. Somehow they missed noting the fetid breath of the hot, unventilated rooms where the girls toiled from before dawn till dusk, inhaling lint, whale-oil smoke and tuberculosis bacilli. Unseeing they passed the squalor of a muddy, pig-infested Irish shanty-town and did not peer into the cellars with their filth, degradation, and disease where members of the lowest caste in the sanctified industrial system slept seven in a bed.

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[3] John Greenleaf Whittier, *The Stranger in Lowell* (Boston, 1845), 20.

[4] Dr. Charles Douglass, president of the New England Association of Farmers, Mechanics and Other Working Men, quoted in John R. Commons, *History of Labour in the United States* (New York, 1918), I, 429.

[5] The "music" was not always appreciated as it first fell on the unsophisticated ears of new mill girls fresh from the country. It sounded the first day to a certain Susan like "crickets, frogs and jews-harps, all mingled together in a strange discord." Yet "people learn to sleep with the thunder of Niagara in their ears, and a cotton-mill is no worse, though you wonder that we do not have to hold our breath in such a noise." Quoted in William Scoresby, *American Factories and Their Female Operatives* (London, 1845), 68.

Charles Dickens, who picked his way squeamishly through the rest of America as a wilderness of circumambient bad manners and ubiquitous tobacco juice, found a contrasting oasis in Lowell. Amid the sea of bright faces confronting him in the factories, he could not "recall or separate one young face that gave me a painful impression." Conspicuous humanitarian that he was, with a knowledge of the long hours of labor prevailing in the mills, he saw "not one young girl whom, assuming it to be a matter of necessity that she should gain her daily bread by the labor of her hands, I would have removed from those works if I had had the power."[6]

Another English visitor, the Reverend Doctor William Scoresby, impressed with the superior Lowell factory conditions as compared with those of his home city, Bradford, discovered only commendable features in his tour of Lowell, especially in the "becoming propriety and respectability of manner" of the mill operatives. He gathered a copious number of moral observations to pour out in lectures on the heads of the more hoydenish mill maidens of Bradford—heads, that he noted with displeasure, went immodestly uncovered into the streets, while the Lowell girls always discreetly covered their crowning glory with their calico caleches when they fared out of doors.[7]

II

In an age when Carlyle was apostrophizing "divine labor—noble, ever fruitful—the grand, sole Miracle of Man," it is not surprising that there should have been so much idealization of the Lowell factory conditions, which were far better than those in contemporary England and in most American industrial towns. But after having gushed at length about the youthful ennoblers of toil "making industry beautiful, and throwing the charm of romance and refinement over the dull monotony of their self-allotted tasks," even Whittier acknowledged that "there have been a good many foolish essays written upon the beauty and divinity of labor, by those who have not known what it really is to earn one's livelihood by the sweat of the brow. . . . Let such be silent. Their sentimentalism is weariness to the worker"—as Whittier's own sentimentalism might have been to a youthful loom-tender at the fag-end of a fourteen-hour day.

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[6] *American Notes* (London, 1893), 57–58.

[7] *American Factories and Their Female Operatives*, 18.

Yet by at least the small group of factory girls who contributed to the *Lowell Offering* and were accepted as authentic spokesmen for thousands of their fellow operatives, criticism of mill conditions was met valiantly and defiantly. They scorned imputations that they were down-trodden or exploited. If into their writings crept sometimes wistful references to life and scenes in the bucolic villages they had left behind them, there was also in many other stories and sketches the more dominant note of satisfaction and pride in their vocation.

These defenses were naturally enough evoked by sentiments of self-respect and self-protection against the imputation that mill work was degrading or that it involved any social stigma in a democratic land. Their light-heartedness was partly made possible by the fact that for most of them the period of factory life was expected to be relatively short—only four and a half years, on the average. For the thousands of young women who travelled down to Lowell with their out-of-style country costumes and carpetbags by stage-coach, or in the "long, low, black wagon" of the employment agents, mill work was not to be a life vocation. Rather it would be but a brief interlude in which they could lay by savings for a marriage dower, to help relatives, or to lift the mortgage on the old homestead. The attractions of city life were also inviting: lyceum lectures, "improvement circles," circulating libraries, and other advantages not available on the hillside farms of New Hampshire, Vermont, and Maine.[8] Manumitted in a few years from the regimen of clanging factory bells that hurried them to work at 5 o'clock in the morning and did not ring them home again till 7:30 o'clock at night on the long summer days, they looked back, in later life, on their Lowell experience with the attachment of alumnae for an alma mater. This note of sentimentalism dominates such narratives as Mrs. Harriet Robinson's *Loom and Spindle*, in which she reproduces expressions of kindred feeling from other former mill girls, with their recollections of youthful factory days gilded by alchemic memory.

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[8] These three states furnished the bulk of the operatives, in proportions, respectively, of 30, 25 and 20 per cent. Henry Adolphus Miles, *Lowell as It Was and as It Is* (Lowell, 1845), 193.

Considered by contemporary standards, the Lowell conditions were as favorable as the schemes of paternalistic factory managers, with eyes directed mainly to profits in a highly competitive system, could make them. The provisions set up in the carefully controlled factory boarding-houses, each in charge of a responsible matron, usually a widow, with regulations as strict as those of a boarding school, were partly motivated by a genuine concern on the part of the management for operatives' welfare. These provisions were also inevitably necessary in order to attract a high type of labor, from good New England country homes.

Girls would be discharged for lying and profanity as well as laziness, and inebriety and immorality were not to be countenanced. One factory frowned upon attendance at dancing school. Boarding-house keepers were required to report operatives who habitually did not go to church, and those who stayed out later than ten o'clock at night found the doors of their boarding-houses locked against them.

Onerous and restraining as these regulations seem to a modern sophisticated generation, the factories in thus acting *in loco parentis* for their youthful charges were hardly doing more than carrying out the prevailing standards maintained for the girls in their home villages, standards approved by parents as a requisite for permitting their daughters to work in the mills. The requirements, indeed, probably did not seem unduly irksome to young girls bred in the Puritan tradition, with its sternly prescribed moral standards which limited opportunities for social intercourse and recreation to those offered by the church and the lecture room.

The men who superintended the mill work on week days were largely to be found as deacons in the churches the girls attended on Sundays or as superintendents in the Sabbath schools where the employees received religious instruction. The most notable flowering of factory talent in the *Lowell Offering*, and its short-lived rival publication, the *Operatives' Magazine*, derived inspiration and sponsorship from "improvement circles" conducted by two of the churches.

To a certain extent the rules for moral protection were self-enforcing, through the weight of self-respecting opinion among the girls themselves, who shunned contamination by fellow workers guilty of suspected improprieties. But in another sense the strict regulations were a powerful weapon in the hands of the factory proprietors. Under the so-called blacklisting system, girls who could not show an honorable discharge from one Lowell mill would not be employed in another. The blacklist could be used against operatives who manifested discontent with labor conditions as well as against those who proved to be inefficient or who were discharged on other grounds. The system thus became a means for punishing revolt and preventing reform.

III

So far as wages were concerned, there was comparatively little ground for complaint, at least in the early and most flourishing period of the mills. Ridiculously low as the average wage of $1.90 per week above board (board amounted to $1.25) seems to the present-day observer, it was higher than women could obtain in any other ordinary occupation in the 1840's, when "hired girls" in domestic service were receiving around seventy-five cents a week. Horace Mann complained in his 1847 report to the Massachusetts Board of Education that factories were actually outbidding the prevailing scale for school teachers.

The fact that out of annual cash incomes averaging around $100, factory girls could go home at the end of a year with savings of from $30 to $75, suggests extraordinary frugality and economy of personal budgeting.[9] As testimony to the workers' thrift, the Lowell savings bank in 1840 counted mill girls as nearly half its depositors with their total savings of approximately a hundred thousand dollars amounting to a third of its aggregate deposits.

Wage scales were lowered and work speeded up as the decade advanced. That this squeezing of the operatives was done to produce excessive profits for the mill stockholders was a common charge by labor reformers and other critics of the regime. It is true that in boom years the mills yielded handsome profits, netting in some instances as high as twenty-two per cent. In the prosperous years of 1844, 1845, and 1846, average dividends of Lowell cotton corporations were 16, 16.4 and 15.7 per cent, respectively. After that they fell off considerably, as a result of the cut-throat competition produced by an increasing number of mills and multiplied volume of production. The Lowell cotton mill average dividend rate for the period 1836–1847 was 9.8 per cent, but for the twelve succeeding years, down to the Civil War, the average dropped to 5.3 per cent.[10]

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[9] *Lowell as It Was and as It Is,* 114–115.

Objects of more serious complaint were long hours and unhealthful working conditions. The hours of labor, varying with the seasons to provide the maximum work possible by daylight, were shortest—eleven hours—in December and January, mounting to a peak of thirteen and a half hours in April, and scaling down slightly to twelve and a half hours in the summer months. This meant working before breakfast on the longest days and not "laying off" till 7:30 o'clock at night—with some girls electing to work longer, even as much as sixteen hours a day for limited periods, to gain extra pay.

Even friendly observers of the Lowell system believed the hours ought to be shortened. "Arguments are not needed," wrote the Reverend Doctor Miles, "to prove that toil, if it be continued for this length of time each day, month after month, and year after year, is excessive and too much for the tender frames of young women to bear." But it must be remembered, he added, "that their work is comparatively light."[11] Whittier condemned the twelve-and-a-half-hour day as "a serious evil." A ten-hour day would surely benefit employees and even employers in the long run, he thought. "Health is too often a matter of secondary consideration," he warned. "Gain is the great all-absorbing object."[12]

Among the most outspoken critics of long hours was Benjamin F. Butler, later to become famous as a Civil War general, but in the 1840's a rising young lawyer in Lowell. Butler had seen the mill workers' side from the vantage point of a youth spent in a Lowell boarding-house operated by his widowed mother. He set about trying to convince mill managers that work days ought to be shortened. They replied that a ten-hour day in Lowell would render competition impossible with the mills of Rhode Island, Connecticut, and other states. Butler suggested shortening the hours and speeding up the machinery. "We cannot run faster," replied the magnates, who asserted they were paying as high wages as their neighbors and operating under superior conditions for their workers. When Butler reproached them with their "duty to humanity," a practical-minded owner replied that one of their duties to humanity was "to give people as cheap calico as can be made."[13]

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[10] Caroline F. Ware, *The Early New England Cotton Manufacture, A Study in Industrial Beginnings* (Boston, 1931), 153.

[11] *Lowell as It Was and as It Is*, 102.

[12] *The Stranger in Lowell*, 117–118.

The dander of "Old Cockeye," who under all his demagoguery had what must be regarded as a sincere interest in the welfare of the underprivileged classes, was now aroused and, having attained leadership in the Democratic party of his district, he proceeded to force the issue in the legislature. A hectic political campaign ensued, in which one of the mills posted a notice on its door warning operatives who voted for Butler and his ticket that they would be discharged. Butler answered by calling a mass meeting at which he delivered a stirring speech on the liberties and privileges of freemen, winding up with the literally fiery peroration:

> You have your right arms and your torches, and by them we will blot out this accursed outrage. As God lives and I live, by the living Jehovah! if one man is driven from his employment by these men because of his vote, I will lead you to make Lowell what it was twenty-five years ago,—a sheep pasture and a fishing place; and I will commence by applying the torch to my own house. Let them come on. As we are not the aggressors, we seek not this awful contest.[14]

Nor was the "awful contest" sought by the mill magnates. They backed down and repudiated the threat. But Butler and his cohorts in the legislature were able to secure no greater reform than a law for an eleven-and-a-half-hour day. The ten-hour goal had to wait for attainment until after the Civil War, although agitation for it went on through the 1840's. The legislature in 1842 did limit the working day to ten hours for children under twelve years of age. Petitions for a general limitation kept piling in, so that the law-makers could not entirely ignore the question. A legislative committee headed by William Schouler, editor of the Lowell *Courier,* in 1845 reported adversely on the workers' demands. "Labor is intelligent enough to make its own bargains," the committee decided. Legislation would put Massachusetts at a competitive disadvantage with other states. The remedy would come "in the progressive improvement in art and science, in the higher appreciation of man's destiny, in a less love for money, and a more ardent love for social happiness and intellectual superiority" —empty platitudes which cost Schouler defeat in Lowell at the next legislative election. Labor organization was attempted to advance the cause, but this, like all other efforts, went to seed in futility.[15]

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[13] *Butler's Book,* 92.
[14] *Butler's Book,* 104.

IV

Despite the idyllic pictures painted by panegyrists of the Lowell system, the agitation for reform brought out incidentally a revelation of health conditions in the mills and in the city that could not be dismissed with complacency. Dr. Josiah C. Curtis, a Lowell medical practitioner with a social conscience, undertook a thorough and systematic investigation, leading him to report to the American Medical Association in 1849 that "there is not a state's prison or house of correction in New England where the hours of labor are so long, the hours for meals so short, and the ventilation so much neglected as in the cotton mills with which I am acquainted."

He computed the factory ventilation was about eighty-five per cent below what it should have been for decent health conditions. Air in the mills, "stifling and almost intolerable to unaccustomed lungs," was filled with lint and, in winter, the fumes from whale oil lamps. High temperatures, running frequently up to ninety degrees, helped make the atmosphere extremely unhealthful. From the hot factories the girls would hurry out to the cooler boarding houses with only half an hour in which to bolt their meals, chiefly consisting of bread, tea and pie, then rush back again to work. "After the day's work is ended," continued Dr. Curtis's report, "two hours release is enjoyed, a part of which is frequently spent in a crowded lecture room, and then they retire to dormitories scarcely better ventilated than the mills," with from four to six and sometimes eight sleeping in the same room.[16]

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[15] *History of Labour in the United States,* I, 540.

For the period 1840–1849, Dr. Curtis's records reveal a total of 827 cases of typhoid fever, while from 1836 to 1848 in this city of 25,000 population there were 929 deaths from tuberculosis, 665 from typhus fever, 483 from dysentery, and 355 from cholera, diseases largely reflecting unsanitary and congested living conditions.[17]

"Few cities are so crowded as Lowell," he wrote in a communication to the Lowell *Courier* in September, 1847. "One week ago, I entered a house in a central location and found it occupied by one store and twenty-five families, embracing 120 persons, more than half of whom were adults! In one of the rooms, which was inhabited by two families, I found one of the families to consist of a man, his wife, and eight children (four of whom were over fifteen years of age) and four adult boarders! It is criminal to permit such an ill-conditioned ulcer so near the heart of our city, without proper remedial applications." [18]

The report of another observer of conditions among tenement dwellers is equally revealing:

> Their rooms are generally not ventilated at all. From six to ten persons frequently sleep in a single room, and sometimes in one bed. . . . The air is stagnant, soon becomes poisonous, and exceedingly offensive. Often every room in the house has from four to twelve inmates, in a narrow lane, perhaps, crowded close with tenements; the little uncovered ground the receptacle of dirty water, rubbish and corrupt vegetable matter; and numerous outhouses of necessity near the windows, sometimes filling every room, and the whole neighborhood with noxious exhalations. . . . I know of one case, where, in two connected rooms in a cellar—and lighted by only three small panes of green glass covered with cobwebs, and where, on entering, I stumbled

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[16] Josiah Curtis, "Public Hygiene of Massachusetts; But More Particularly of the Cities of Boston and Lowell," in *Transactions of the American Medical Association*, II, 517.

[17] *Transactions of the American Medical Association*, II, 528, 547.

[18] *Transactions of the American Medical Association*, II, 520.

> over the beds, because I could not see them—four families, amounting to twenty-two souls, were living.[19]

It was hard for apologists to brush away such facts or to continue to picture Lowell as an industrial Elysium. Moreover, by the late 1840's a marked deterioration was in progress. Not only had appalling congestion been the result of too rapid growth, but the character of the population and of the mill operating personnel was beginning to be altered in pronounced fashion. The native American stock in the mills, with operatives living in company boarding-houses, had begun to give way to immigrant operatives, including Irish families who lived in their own little shanties, crowded tenements or basements.

Kirk Boott, one of the more autocratic of the Lowell mill owners, who had been educated in England and there derived some hard-boiled ideas from the mill moguls of the English midlands (and who once roused Lowell citizens to opposition by hoisting the British Union Jack above the Stars and Stripes on the Fourth of July)[20] lured Lancashire and Gloucestershire men to his mills to serve as weavers, loom-tenders, dyers, designers, and overseers. The introduction of carpet manufacture next brought weavers from Lanarkshire, Scotland. "John Bull's Row" on Prince Street, and the "Scotch Block" on Market Street drew their names from the congregation of English and Scottish mill workers supplementing the Yankee labor.

Then, driven by disastrous potato famines, came the Irish. At first their employment was chiefly in menial capacities, and so strong was the early prejudice against them that Ben Butler recounts that a strike of Yankee girls resulted in one mill because of the presence of an Irish scrub-woman.[21] Introduction of Irish operatives in more skilled mill work developed slowly. They constituted only a small percentage of mill employees in the late 1840's, but the proportion increased in the 1850's.[22]

It was not a change either sought or desired by most of the mill operators. But during the depression following 1847, hundreds of the Lowell factory girls from New England rural areas went home, never to return. Farmers' daughters who had come to Lowell as to a boarding school began to go elsewhere. In many instances their families were leaving the New England hillsides to migrate westward. In the west were new opportunities for girls as teachers, missionaries, and farmers' wives. Irish men who had done the rough work of canal digging, and Irish women who had served as scrub-women and domestics began to find other forms of employment in the mills. They were a more docile and tractable group, willing to put up with long hours and lowered standards which were unattractive or unacceptable to native operatives.[23]

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[19] *Transactions of the American Medical Association*, II, 522.

[20] *Loom and Spindle*, 8, 10.

[21] *Butler's Book*, 90.

[22] *The Early New England Cotton Manufacture*, 230.

The character of life and labor in the Spindle City began to be irrevocably altered in the decade preceding the Civil War, and whatever earlier evidence had persuaded presidents, pilgrims, and poets to see an American industrial Utopia in Lowell was largely dissipated.

Discussion

1. Enumerate the characteristics of the selection which show it to be a scholarly research essay.
2. Write a one-sentence summary of each of the four divisions of the essay. Does the essay naturally fall into four parts? Or does the sectioning seem to be a device imposed by a magazine editor?
3. Why does the author limit himself to Lowell, with only an occasional reference to other New England towns? Why does he begin with the 1830's? Why does he bring his account only to the Civil War?
4. For what kind of readers is the author writing? Specialists? Intelligent readers generally?
5. A. Comment on the beginning of the essay. Show that the author is concerned to catch the interest of the reader. B. Show by examples of phrasing and other details that the author is trying to write interestingly throughout the essay.
6. How many sources do the footnotes show the author to have consulted? Does the essay seem to be based on enough sources?
7. Comment on the quality of the sources. Which are based

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[23] *History of Labour in the United States,* I, 544.

on first-hand observation? Which depend mainly on what others have observed? Which of the sources seem dependable? Which seem to be superficial or biased? Does the author reveal that he does not regard all his sources as equally valuable?

8. Which footnotes acknowledge direct quotations? Which do not? Justify each of the latter.
9. Which sources are cited more than once? Show where the author might have used the abbrevation *ibid.* Where might he have used *op. cit.*?
10. Among research essays in this book are "The Rise and Fall of the Great Bottle Trust" (pp. 291–298), "The Santa Fe Trail" (pp. 263–271), and "New Design for Living" (pp. 317–330). Of these only the last has footnotes, and it very few. Examine these essays. What kinds of sources are they based on? Point out some passages in these essays which might have been accompanied by footnotes referring to sources.

Writing

Write a carefully documented research essay of 1500–2000 words on a limited subject. Consult a composition textbook for suggested methods of research, limitation of topic, note-taking, record of bibliography, and footnoting.

FREDERICK LEWIS ALLEN · *Benny Goodman and Bach*

One morning in the winter of 1937–38 a crowd began to gather outside the Paramount Theatre in Times Square, New York, as soon as it was light. By 6 A.M. there were three thousand people assembled in the otherwise empty streets—mostly high-school boys and girls in windbreakers and leather jackets. By 7:30 the crowd had so swelled that ten mounted policemen were sent from the West 47th Street station to keep it under control. At 8 o'clock the

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—From *Since Yesterday* by Frederick Lewis Allen. Copyright, 1940, by Harper and Brothers.

doors of the theatre were carefully opened to admit 3,634 boys and girls; then the fire department ordered the doors closed, leaving two or three thousand youngsters out in the cold.

Benny Goodman and his orchestra were opening an engagement at the Paramount. Benny Goodman was the King of Swing, and these boys and girls were devotees of swing, ready to dance in the aisles of the theatre amid shouts of "Get off, Benny! Swing it!" and "Feed it to me, Gene! Send me down!" They were jitterbugs, otherwise "alligators," equipped with the new vocabulary of swing ("in the groove," "spank the skin," "schmaltz," "boogie-woogie," "jam session," "killer-diller," and so on endlessly); members of that army of young swing enthusiasts all over the country who during the next year or two knew the names and reputations of the chief band leaders and instrumentalists of swingdom—Goodman, Tommy Dorsey, Artie Shaw, Gene Krupa, "Count" Basie, Teddy Wilson, Louis Armstrong, Jack Teagarden, Larry Clinton, and others without number—as a seasoned baseball fan knows his professional ball players.

To trace fully the origins of this craze one would have to go back very far. Suffice it to say here that during the nineteen-twenties, the jazz craze—which had begun long before in the honky-tonks of New Orleans and had burst into general popularity with the success of "Alexander's Ragtime Band" and the rising vogue of the one-step and fox-trot as dances between 1911 and 1916—had become tamed into decorum and formality; but that even during this time there were obscure jazz bands, mostly of Negro players, which indulged in a mad improvisation, superimposing upon the main theme of the dance music they were playing their own instrumental patterns made up on the spur of the moment (and sometimes later committed to writing). During the early years of the Depression there was little popular interest in this "hot jazz" in the United States; what a worried public wanted was "sweet" music, slow in rhythm and soothingly melodious, like "Some Day I'll Find You" (1931) and "Star Dust" (very popular in 1932), or poignantly haunting, like "Night and Day" (1932) and "Stormy Weather" (1933). But Europe had acquired a belated enthusiasm for jazz rhythms and in France there grew up something of a cult of "le jazz hot." Phonograph records of the playing of such experts as Louis Armstrong and his band sold well abroad. In the fall of 1933

—at about the time of the NRA parades and the coming of Repeal—an English company arranged with a young New Yorker who was crazy about hot jazz to try to get some good records made by a band of American whites; and young John Henry Hammond, Jr., persuaded the scholarly-looking clarinetist, Benny Goodman, who was playing in a radio orchestra, to gather a group of players for this purpose.

The resulting records not only sold well in England but made an unexpected hit in the United States; and thus began a public enthusiasm for "swing"—as the hot jazz full of improvisation came to be called—which welled to its climax in the winter of 1937–38, when the bespectacled Mr. Goodman, playing at the Paramount and later in Boston and elsewhere, found that the boys and girls so yelled and screamed and cavorted when his band began to "send" that a concert became a bedlam. When in the spring of 1938 a Carnival of Swing was held at Randall's Island in New York, with twenty-five bands present, over 23,000 jitterbugs listened for five hours and forty-five minutes with such uncontrollable enthusiasm that, as a reporter put it in the next morning's *Times*, the police and park officers had all they could do to protect the players from "destruction by admiration."

Among many of the jitterbugs—particularly among many of the boys and girls—the appreciation of the new music was largely vertebral. A good swing band smashing away at full speed, with the trumpeters and clarinetists rising in turn under the spotlight to embroider the theme with their several furious improvisations and the drummers going into long-drawn-out rhythmical frenzies, could reduce its less inhibited auditors to sheer emotional vibration, punctuated by howls of rapture. Yet to dismiss the swing craze as a pure orgy of sensation would be to miss more than half of its significance. For what the good bands produced—though it might sound to the unpracticed ear like a mere blare of discordant noise—was an extremely complex and subtle pattern, a full appreciation of which demanded far more musical sophistication than the simpler popular airs of a preceding period. The true swing enthusiasts, who collected records to the limit of their means and not only liked Artie Shaw's rendering of "Begin the Beguine" but knew precisely why they liked it, were receiving no mean musical education; and if Benny Goodman could turn readily from the playing of "Don't

Be That Way" to the playing of Mozart, so could many of his hearers turn to the hearing of Mozart. It may not have been quite accidental that the craze for swing accompanied the sharpest gain in musical knowledge and musical taste that the American people had ever achieved.

This great gain in the appreciation of good music was one of the most remarkable phenomena of the nineteen-thirties. Some credit for it belongs to the WPA, which, doing valiant work in music as in literature and the theatre and the plastic arts, not only offered music classes and other aids to the potentially musical, but maintained no less than 36 symphony orchestras. But the chief credit probably must go to the radio, which had been demonstrating the ancient truth that if you throw at people enough of the products of any art, good, bad, and indifferent, some of these people will in time learn to prefer the good.

For a long time the radio had been spilling into the ears of millions of Americans an almost continuous stream of music of all sorts, mostly trite. At the beginning of the nineteen-thirties it was still accepted as axiomatic by most radio people—and particularly by those business executives whose task it was to approve the programs devised by advertising agencies to promote the sale of their goods—that good music was not widely wanted. Long before this, however, the broadcasting companies had been experimenting with putting music of high quality on the air, partly for the sake of prestige, partly to convince the people who wanted the radio to be more educational that the radio companies themselves were hot for culture. The National Broadcasting Company had put on the New York Symphony Orchestra as early as 1926, the Boston Symphony in 1927, the Philadelphia in 1929. By 1929 the Philadelphia Orchestra program had actually secured an advertising sponsor: Philco took the plunge. In 1930 the Columbia Broadcasting System began a series of concerts of the New York Philharmonic on Sunday afternoons, and the next year the NBC began putting the Metropolitan Opera on the air on Saturday afternoons. Before long the opera broadcast, too, acquired sponsors; a cigarette company and a mouth-wash company signified their willingness to pay for it if only a few well chosen words about the advantages of the right sort of smoke or gargle might accompany the works of Wagner and

Puccini. What was happening was that these classical programs were obviously attracting listeners and more listeners.

So the movement swept on until on the first day of February, 1937—just a little while before President Roosevelt brought out his plan for the enlargement of the Supreme Court—an emissary of David Sarnoff of the National Broadcasting Company, calling upon Arturo Toscanini in his native Milan, told him that the NBC wanted him to conduct a radio orchestra the following winter.

"Did you ever hear of the NBC?" the emissary, Samuel Chotzinoff, is said to have begun.

"No," replied Toscanini.

Some explanation was required; and then Chotzinoff handed over a memorandum which suggested several alternative plans for Toscanini concerts on the air. The great conductor peered at it nearsightedly, ran his finger down the list, and presently stopped.

"I'll do this," said he. He was pointing at a suggestion of a concert a week for ten weeks.

He did it—with an orchestra especially recruited to do him justice. When, at Christmas time of 1937, he stepped upon the podium in the biggest broadcasting studio in the NBC Building in New York, facing a visible audience of a thousand or so men and women (equipped with satin programs guaranteed not to make crackling noises) and an invisible audience of millions more at their radios all over the country, it was clear that a milestone had been reached. Things had come to the point where the huge radio public was ready to be given the best that could be got, and given it direct—not simply granted a chance to overhear what was intended in the first place for the musically elect.

The remarkable rise in American musical appreciation may best be measured, perhaps, by citing a few figures collected by Dickson Skinner in *Harper's Magazine* in the spring of 1939. Here they are:—

> In 1915 or thereabouts there had been 17 symphony orchestras in the United States. By 1939 there were over 270.
>
> It was estimated that in 1938–39 the combined audiences on the air for the Metropolitan Opera on Saturday afternoon, the NBC symphony on Saturday evening, and the New York Philharmonic and Ford hour on Sunday, numbered 10,230,000

> families *each week.* (Figure for yourself how many families had been able—and willing—to hear music of such calibre before 1930.)
>
> As evidence that these audiences were increasing, it was estimated by the Cooperative Analysis of Broadcasting that the audience for the Ford Sunday evening hour, offering the Detroit Symphony, was 118 percent larger in 1937 than in 1935; and that by 1938 it was fifth among all radio programs in national popularity, being exceeded only by the news broadcast and by three other commercial programs.
>
> The NBC Music Appreciation Hour, conducted by Walter Damrosch, was being heard each week in 1938 by more than seven million children in some 70,000 schools—and probably by three or four million adults also.
>
> And finally, during 1938, broadcasts of symphony orchestras and of grand opera were being carried by the two NBC networks at a rate which averaged more than an hour a day.

After reciting these statistics, it would seem hardly necessary to add that the biggest phonograph company reported that its sales of records increased 600 percent in the five years 1933–38. The phonograph, once threatened with virtual extinction by the radio, had come into its own again, not only because of the swing craze but even more importantly because of the widespread desire to hear "classical" music of one's own choice without having to wait till a radio orchestra got round to playing it.

Thus far very little benefit from the growth of this huge audience had come to American composers. But that time would presumably arrive before long. For the testimony of concert performers who found that their audiences now wanted not simply the old sure-fire favorites, but the less familiar symphonies and concertos; the number of school and college glee clubs that now preferred to sing valid music; the growing number of listeners to Station WQXR in New York, which specialized in good music; the demeanor of the crowds who came to such music festivals as that held each summer in the Berkshires: these were among the accumulating fragments of evidence that a great American musical public of real discrimination was being built up.

DIXON WECTER · *New Design for Living*

The impact of this severest and longest depression upon daily life could be observed everywhere. The average woman's world of cooking, mending, sewing and keeping house continued less impaired than that of the average man, that is, so long as there was food to cook, clothing to repair and a roof overhead. One out of five women, however—a total of nearly eleven million—worked outside the home in 1930. Since 1890 their number had increased sixfold. Such women were directly vulnerable to the employment crisis, though at first they tended to fare comparatively well since their lower wages and usually greater docility found favor in employers' eyes.

As the Depression wore on and labor surpluses brought short hours and scant wages for all, this feminine advantage shrank steadily. Women who lost their footing in the undertow of unemployment found jobs hard to regain, and to combat the handicap of gray hair a feminist campaign with the cheery slogan, "Always twenty-eight," was begun early in the decade urging women employers to hire older members of their own sex as counterweight to the masculine partiality for youth and beauty.

Even in the teaching profession they met growing discrimination. In 1931 the National Education Association reported that more than three quarters of all cities had banned employment of wives. This policy meant more rapid turnover, delayed marriages and removal from the schoolroom of many mothers whose interest in children had often aided their professional success. Women workers, in whatever field, were assumed to be filching some male breadwinner's job for the sake of pin money or to augment the family's sumptuary margin.[1]

—From *The Age of the Great Depression, 1929–1941,* by Dixon Wecter. Copyright 1940 by The Macmillan Company and used with their permission.

[1] In the wake of the Depression, a survey early in 1937 by the National Federation of Business and Professional Women's Clubs yielded, however, a somewhat different picture. Of more than twelve thousand female employees, 48 per cent had dependents, while 17.4 per cent carried the sole responsibility

In the home, hard times caused many urban families quickly to give up domestic help.[2] In small towns and rural districts the onset of adversity sometimes added another burden to already busy wives by reviving half-forgotten crafts of an earlier day. Taught perhaps by the grandmother, many a household embarked upon soapmaking, fruit drying, pickling, preserving, bread baking, curing in smokehouses and storage in root cellars, brewing medicine from herbs, cleaning, dyeing and clothmaking. In 1931 sales of glass jars exceeded any in the previous eleven years, while the demand for canned goods dwindled.

But this revival was short-lived, hardly lasting through the times of greatest stringency, for even the rural family had little abiding interest in those skills still cherished by Old World peasants. Drastic cuts in income deprived poorer households of amenities like newspapers, magazines, movies, and often such commodities as toilet paper, coffee, tea and sugar. Observers tended to speak brightly of "the live-at-home movement"; farm families with few illusions sourly called it "wooden shoes." Frequently the wife improved finances at the cost of her own energy by such means as taking in laundry or sewing, baking cakes and pies for sale, or accommodating boarders or tourists. Individuals with a little capital might open motor camps, wayside stands, beauty parlors, novelty stores.

The spate of gadgets which industry had poured into the American home since the First World War—electric toasters, egg beaters, grills, waffle irons, percolators, washing machines, electric stoves—abruptly slackened in the early thirties, along with sales of furniture and sewing machines. On the other hand, electric refrigerators, meeting a still unsatisfied market with their new efficiency and convenience, continued to sell briskly. Condensed milk, rayon and radios were other commodities which the public refused to yield. Gasoline and automobile-accessory sales also persisted, but the purchase of new cars dropped like a plummet, now

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for households ranging from two to eight persons. Furthermore, while average earnings fell appreciably between 1930 and 1936, the number of dependents per woman increased. *Why Women Work* (Public Affairs Pamphlet, no. 17, 1938), 3, 30.

[2] By the end of the decade, despite partial recovery, probably 95 per cent of American homes were being run by the housewife with no outside aid. J. C. Furnas and others, *How America Lives* (N. Y., 1941), 330.

that driving yesteryear's model was no longer a social stigma. Manhattan cab drivers saw their revenues decline from seven dollars a day to two or three.

A more revealing index of retrenchment in New York City was the loss of some forty thousand telephones between 1930 and 1931 and the quadrupling of the cheap dinners served by Childs restaurants. The cigarette, boomed by the war nerves of 1917–1918, proved an equal solace to the depression jitters of the thirties, production rising from a hundred and twenty-three billion in 1930 to a hundred and fifty-eight by 1936. The single standard in smoking continued to win its way, restaurant service for women in a typical middle-sized town now including an ash tray.

Conditions in Middletown[1] afford a close-up picture. Between 1929 and 1933, while the number of filling stations almost doubled, sales fell only four per cent, for most families regarded their automobile as indispensable. At the other extreme, jewelry stores showed the heaviest decline of custom, eighty-five per cent of their dollar volume. Trade in lumber and building materials fell almost as much, while furniture stores and candy shops lost seventy per cent of their patronage. Commercial eating places saw their business reduced sixty-three per cent, with surrender of the family luxury of "eating out for a change." It could be added, however, that this was no permanent reversal, for with the first symptom of better times cooking resumed its interrupted flight from the home, and before the end of the decade the number of restaurants was multiplying faster than the number of families.

Everywhere clothing offered a natural province for economy. Men's attire was more sensitive to depression than women's, for even the most elemental sense of chivalry recognized the superior importance of fashion for the wife and daughter. As early as 1930, when the output of women's and children's dresses fell only thirteen per cent below the previous year, men's suits dropped twenty-five and in the next year sank thirty-two per cent under the 1929 level. For the sake of both economy and convenience, more males began to abandon stiff collars, hats, garters, undershirts, vests and the tops of bathing suits.

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[1] Name disguising the identity of a Middlewestern town of medium size studied by two social scientists as a representative urban community. See Robert S. Lynd and Helen Lynd, *Middletown*, 1937. [Editors' note.]

In women's clothes the early thirties saw the large-scale copying of smart frocks with cheaper materials and workmanship. Also, under pinch of need, the average girl tended as never before to make her own dresses and hats. "An accompanying return to statelier morals and manners" was forecast by a fashion report in September, 1930, concerning the longer skirts and more feminine modes which had begun to repudiate the boyish angularity of the jazz-age flapper. Ruffles, bows and curvaceous lines heralded the rediscovery late in 1931 of Empress Eugenie hats and other styles. Bravado at small cost found expression in brightly painted fingernails, introduced in Paris in 1929, which within the next two years spread from Park Avenue to the sales girl and typist.

Meanwhile the debutante slouch yielded to better fashions in posture, with a tendency to "tuck in and walk tall." Bobbed hair scored an apparently lasting triumph, although the close-cropped extremes of the jazz age grew rarer, and after the middle years of the period the pageboy or curled bob reaching to the shoulder dallied with the old-fashioned idea of crowning glory and comported with a passing vogue for bows in the hair and "little girl" costumes seen wherever dancers followed the rhythms of "swing." Loose, athletic clothing was so clearly the modern preference that by the mid-thirties skirts began to rise again—almost an index of national confidence—while the informality of Florida and California introduced beach pajamas, slacks and shorts to the rest of the country, under protest in many staid communities. Sandals for street and evening wear prepared the way in the latter thirties for the open-toed shoe.

So long as the Depression was paramount, people had to face retrenchment not only in food and clothing, but often in lodgings as well. While economy among the rich might involve closing or selling at a loss a "cottage" at Newport, Bar Harbor, Palm Beach or Santa Barbara, or relinquishing a villa in the South of France, middle-class folk might have to give up a rented house at the shore or vacation spot in the mountains and, quite commonly, move to a less expensive house or apartment in town. "Doubling up" with parents, in-laws, and employed children occurred countless times. A survey of sixty-four cities in January, 1934, revealed that, among all sorts and conditions, the number of "extra families" varied from two to fifteen per cent of the total, with the highest proportion in the

South. South Carolina's population increased a sixth during the Depression, Georgia's nearly as much.

Youths who had left dour and slovenly surroundings to win independence or better their chances, contribute support to the old folks, or enroll in training school on borrowed funds, now returned stonebroke and crestfallen, acquiescing in Robert Frost's well-known definition of home as "the place where, when you have to go there, they have to take you in." Everywhere tension between father and son seemed to increase if the latter came back jobless after a period of self-support. A wage-earning parent was prone to reassert his authority, as if the youth had never been his own boss. In the city the crowding of families into small apartments and tenements unquestionably aggravated tempers and the general mood of defeat. Relief recipients in their constant search for cheaper quarters tended to move oftener than did others, though in so far as possible they clung to the old familiar neighborhood.

Yet jobless men and their families often kept to themselves—shabbily dressed children hiding from visitors, adults sullenly refusing hospitality from still employed friends because of the hardship of repaying an evening at cards over sandwiches and coffee. The more sensitive just wanted to be let alone. In this way contact between the haves and have-nots, along with the old comradeship of American life in fat times and lean, tended through pride to be broken.[3] Some families, determined to keep up appearances at all costs, went their accustomed pace until disaster broke their spirit; others arrived at the same pass from a carefree outlook upon life or from unwillingness to lower certain standards of living. Still others battled the Depression with resourcefulness and pluck, sometimes making a game of penny pinching and savoring to the full their rare extravagances in recreation.

Within the family circle were likely to dwell such specters as unpaid bills, sickness, need of eye and dental care, loss of a nest egg for youth's education or age's security. Such cumulative worries often warped normal relations in the home, causing hitherto loyal wives to scold job-seeking husbands returning late for meals, or hurl the taunt—picked up all too easily from lips of the affluent—that "anybody can find work if he wants it." The discredited breadwinner was apt to lose his spunk, the household its initiative. With old work habits gone and laziness no longer grounds for reproach the family often stayed up late listening aimlessly to the radio or just sitting, and slept far into the morning. Restiveness sometimes led to a craving for drink or the excitement of gambling, if any funds lay at hand, and an aftermath of self-reproach or the blues.

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[3] Among two hundred workless families questioned in New Haven, two-thirds in former days had practised neighborly visiting, but now only a little more than a quarter continued the habit, while participation in parties fell from twenty per cent to three. E. W. Bakke, *Citizens without Work* (New Haven, 1940), 7–8. For a similar report, see Lilian Brandt, *An Impressionistic View of the Winter of 1930–1931 in New York City* (N. Y., 1932), 16–17.

In homes where the stern dictatorship of husband and father was traditional, such as immigrant families from Continental Europe or rural households, the breadwinner's loss of prestige or even abdication of authority proved striking. Elder children contributing to family support gained new prestige as members of the inner council. If the wife became chief money-maker, she usually assumed greater family command, with the jobless husband turning to domestic chores. Frequently, however, in the urban home no stern male dominion had ever been asserted. Here in gloomy times the wife often tried to cheer up and pamper the workless husband, even as he had been prone to spoil her in the days of their prosperity. Also the constant presence of an unemployed father at home was likely to heighten his companionship with the younger children, promoting play and intimacy.

Many observers tried to find a silver lining in this stronger *esprit de corps* of the clan. Secretary Ray Lyman Wilbur told the National Conference of Social Workers in May, 1932, that delegated responsibility for children had ended: "In adversity the home takes its normal place. There is no substitute for intelligent parental care exercised through the day, at meal times, and in controlling proper sleeping conditions at night." Applying accurately enough to abodes where the nursemaid had been discharged, these words were hardly realistic in respect to homes where wage-earners' wives were driven forth to earn an extra dollar, food was meager, children too shabby to attend school. In similar vein Middletown boosters liked editorials cheerily avowing that "many a family that has lost its car has found its soul," thanks to sounder nerves, rested bodies, better digestion and more sober Sabbath observance. Nor were such utterances merely the revised Protestant version of old Puritan gospel, for the Reverend John F. O'Hara, president of Notre Dame University, added his assurance that "as a result of the Depression a great portion of the American public rediscovered the Home, rediscovered fireside joys, rediscovered the things of the spirit."

Such optimism held a grain of truth but also much chaff. Husband and wife, for example, almost certainly spent more time together, sharing inexpensive pastimes like listening to the radio, playing cards or reading aloud. Declining attendance at amusement places chiefly for men, such as pool halls, bowling alleys, baseball games, prize fights, bore negative proof of the change. But if some couples were drawn together anew in the bonds of misfortune and enforced propinquity, others grew embittered by want, insecurity and each partner's futile reproaches. A collector of many case histories in a big industrial city found that among the married unemployed "sex life decreased, if it was affected at all," from fear of pregnancy, feminine loss of respect for an economic failure and a general atmosphere of repressive anxiety.

Bewilderment, hesitation, apathy, loss of self-confidence, were the commonest marks of protracted unemployment. A man no longer cared how he looked. Unkempt hair and swarthy stubble, shoulders a-droop, a slow dragging walk, were external signs of inner defeat, often aggravated by malnutrition. Joblessness proved a wasting disease. What social workers called "unemployment shock" affected some men as if they were in the grip of panic, driving them to frenzied search for work by day, sleepless worry at night. To a few persons joblessness apparently brought a sense of personal importance—of being part of a national crisis, a front-page problem—but more universal was a mood of lost self-esteem, perplexity, or bitterness toward old employers and life in general.

The sum of these effects upon the former breadwinner added up to weaker morale, by a vicious cycle making him still more unemployable. A survey of idle engineers reported in 1933 that three out of every four showed morale inferior to that of the average job holder. A physical counterpart of these losses revealed itself in flabby muscles, faulty coordination and lack of stamina when work was resumed. As with an inactive plant, rust had taken its toll. In 1933 when a group of forty long-unemployed stenographers were set to work in a New York office, all quickly showed signs of nervous fatigue under the old routine and several grew hysterical. More than two-thirds needed from two to three weeks' readjustment before they could take dictation without breaking down.

Those who still clung to jobs or oscillated between spells of work and idleness were haunted by the same bogey of insecurity. Dogged resolve to hold on to what one had, along with fear of exchanging poor but steady wages for better-paying jobs with greater risks, blunted the American sense of enterprise. Enthusiasm for work and loyalty to the concern also tended to dim. Many agreed that it "didn't pay to work too hard, because employers will only take advantage of you." The success legend, whose brightness for generations had hypnotized youth, now began visibly to tarnish, along with those kindred Puritan virtues of diligence and frugality. The trusty old formulas seemed to have failed. "We realize that honesty, integrity, and industry don't get you to the top any more," said a collegian at Thomas Jefferson's university in the mid-thirties.

Such misgivings were not confined to youth. "It ain't any good starting saving again," said old folks who had seen banks close one after another and hoarded funds eaten by the years of the locust. "We've got in so deep I guess we'll never try to get out." Among a group of nearly four hundred jobless men, half agreed that "luck" or "pull" determined success more than did ability; a little less than half accepted the traditions of "rugged individualism" in business, although three-fourths of a similar group of employed men still indorsed that time-hallowed philosophy. For many this disaster impeached the gospel of thrift. Some decided that the apostles of saving—the bankers and self-made industrialists—were largely responsible for what had happened. Still others reflected philosophically that "you can't take it with you"—an old saying caught up by the refrain of a song hit in 1931 and echoed five years later in one of the decade's favorite plays, a comedy by George S. Kaufman and Moss Hart about a happy-go-lucky family who picnic through life. Why worry? Those still able to buy books made Edmund Jacobson's *You Must Relax* a best seller in 1934, and a little later took up the self-help manuals of Marjorie Hillis, *Live Alone and Like It* (1936) and *Orchids on Your Budget* (1937), mingling a gay insouciance with doctrines which her father, a once famous Congregationalist preacher, in his day had set forth in all their pristine strenuousness.

Too deep for the average citizen to fathom, the floods of disaster had rolled in to erase ancient tide marks and tug at the moorings of inherited wisdom. This era brought a questioning into American life deeper than any other since the Civil War. Stereotypes of thought, traditional saws, the tribal wisdom of the elders, all were challenged in books, magazines and private talk. Perhaps, after all, the promise of American life would turn out merely to be propaganda, the tyranny of words or the folklore of capitalism. But while youth was prone to rebel, middle age and senescence often clung all the more stoutly to old loyalties, particularly if they had a personal stake in the *status quo*—leaping to the defense of verities like hard work, thrift and individual enterprise, and opposing change in those concepts of law and government which they associated with happier days. Yet even among this group the threat of poverty wrought its effect, as the Townsend crusade demonstrated.

For, after the passage of two or three years, unemployment had entered into the grain of American life. Its severity and apparent hopelessness were without parallel. Panics and bank failures, rainy days and lean years, flood and drought, had come and gone many times since the first settlers carved out a civilization in the howling wilderness. This crisis, it seemed, had no precedent. Poverty was everywhere; cornered by it, the jobless man now felt something resembling claustrophobia.

A case history from the files of the California State Unemployment Commission in 1932 will illustrate the difference. This octogenarian had struck many ups and downs since that day in 1873 when, as he recalled, he was working in New York City and

> the bank of Jay Cooke and Company broke and my boss closed up and I was thrown out of work and I became a tramp. . . . At that time the whole West was open to homesteaders. At that time the mountains were honeycombed with new homes, and new mines that were being opened. At that time railroads had been building all over the country.

From a tramp he became a section hand, and after that employment was steady, first as a coal miner and later a grocer, until by 1890 he found himself "a fairly well-to-do business man." But the Panic of 1893 cleaned him out, and once more he took to the road as a wanderer until in 1895 he succumbed to the lure of California and managed to raise enough cash to grubstake him in ranching. Life again became easier as he accumulated another competence. Now in old age he had lost everything, and in his bones he knew this was worse and different. "There isn't an acre of decent land to be had for homesteading. There isn't a railroad to be built anywhere," he reflected. "Years ago Horace Greeley made a statement, 'Young man, go West and grow up with the country.' Were he living today, he would make the statement, 'Go West, young man, and drown yourself in the Pacific Ocean,' like the lemmings do in Norway." There was no farther range.

An idle man seeking to rationalize his plight was apt to follow one of several roads. If he saw it as the result of machines supplanting men, he might take it all pretty calmly since no one could get very angry with a machine. If he blamed himself or his hard luck, he slid down the path of defeat. If he laid the responsibility upon society or the economic system, he chose the fork of radicalism. The steps of an undetermined number veered toward the left. One careful study found that unemployment made men a good deal more radical than it made women. Nearly a quarter of the idle, or about four times as many as among job holders, agreed that "a revolution might be a very good thing for this country," though practically all reacted strongly against concepts like "communism" and "alien radicals" and affirmed that "a man should be willing to fight for his country."

Such radicalism as existed was mainly homespun, doctrinally naive and, at bottom, the plain man's instinctive resentment of poverty surrounded by shops bursting with food and farms smothered under their own productive surplus. "Thinking is dangerous these days," said one down-and-outer to a social worker in 1932. "Please leave me alone." A newspaperman going through the towns and backwoods of North Carolina in this same year—amid the ruin wrought by five-cent cotton, stagnant mills, bank failures, foreclosures and other evils conveniently saddled upon the Yankees of Wall Street—heard murmurs of the word "revolution." A Michigan villager early in the New Deal told a Federal Emergency Relief official:

> I don't believe you realized how bad things were getting before this set-up started. . . . They all said that if things got any worse and something didn't happen pretty soon, they'd go down Main Street and crash the windows and take what

> they needed. They wouldn't pick on the little stores. They'd go after the big stores first . . . no man is going to let his wife and children starve to death.

Did not Daniel Willard, president of the Baltimore and Ohio Railroad, to the scandal of some people, say in a speech at the Wharton School of Finance in 1931 that capitalism was out of joint, adding doughtily, "I would steal before I would starve"?

Spring of the next year saw hunger marches far and wide over the country and a serious unemployment riot at Dearborn, Michigan, with the shedding of blood. The nearest approach to widespread mass action was the "Bonus Army." "Adjusted compensation" certificates for veterans of the First World War, authorized by Congress in 1924, had been made payable in 1945. Early in 1931 the administrator of veterans' affairs reported to Hoover that about two hundred and seventy-two thousand men stood in need of relief. A cash loan upon these certificates was soon provided, over the president's veto, but shortly thereafter the Patman bill proposed immediate payment of the balance.

To lobby for this measure some twelve to fifteen thousand homeless veterans, following the lead of an Oregon band shepherded by a jobless cannery manager, Walter Waters, converged from all quarters upon Washington in the late spring of 1932. They took shelter in empty federal buildings or pitched tents on mud flats across the Potomac. The administration stressed infiltration of their group by a sprinkling of Communists and persons with criminal records. In fact, however, known "Bolshies" were given the bum's rush; and when on June 16 the Senate overwhelmingly rejected the Patman bill, veterans keeping vigil on the Capitol steps swallowed their disappointment and rousingly sang "America."

When Congress early in July voted to pay the passage home of impoverished marchers, about five thousand left town; later in the month, with Congress adjourned, the president ordered General Douglas MacArthur, chief of staff, to evacuate the rest. A riot between the men and Washington police brought death to two veterans. With tear gas and fixed bayonets the troops quickly scattered the laggards, who retreated whence they came or joined the migratory flux of the dispossessed along roads and railways. At all events, the talk heard in some excitable circles that ex-servicemen would follow the precedent set abroad and become the spear-head of revolution—whether to the right or the left—proved silly.[4]

Against the spread of doctrinaire Marxism, even in the darkest days of 1932, stood the strong American faith in democratic processes, the people's habit of hopefulness and their distrust of "foreign" agitators. To the ballot box rather than the soapbox most citizens looked when they wanted a change. Here and there, in a few industrial centers, discontent simmered beneath the lid: Seattle, for example, with its syndicalist background and the activities in 1932 of its Unemployed Citizens League, or Detroit after the city's credit reached exhaustion and Father Charles E. Coughlin began to fish in the troubled waters. But equally bad conditions elsewhere were accepted with fortitude.

In New York City homeless men were sleeping in subway stations; and in the hollow of an abandoned reservoir in Central Park flourished a locally famous settlement of 1932 called "Hoover Valley," whose inhabitants, feeding on stale bread and the refuse of markets, gazed listlessly at Manhattan's skyline ringed with half-empty skyscrapers. In Youngstown, Ohio, where open-hearth furnaces lately glowed with the enterprise of a major American industry, derelicts by the hundreds huddled for warmth in the structure housing the municipal incinerator. Through the nation men were dwelling in abandoned factories, freight cars on sidings or shacks made of waste lumber and flattened tin cans. With their women and children the uprooted tended to congregate on the outskirts of town, living from hand to mouth. These were the consumers without buying power. By the summer of 1932 many communities were turning over tracts of public land to the unemployed for cultivation as small farms or vegetable gardens. In Gary, Indiana, for example, twenty thousand families raised their own provender on land lent by the city.

Despite repeated official assurance that nobody would be allowed to starve, in New York City at least twenty-nine persons are known to have died from starvation in 1933, while one hundred and ten such fatalities, chiefly children, were reported for the nation at large prior to 1934. Far more numerous were those victims of disease, accident and general collapse to whose death hunger was largely contributory. Philadelphia's community health center experienced a rise of about sixty per cent in its malnutrition diagnoses between 1928 and 1932, markedly in the age group between six and sixteen. A sharp decline in the consumption of milk, eggs and fresh fruit showed all too clear a correlation with an increase of rickets, scurvy, pellagra. In one New York City health center the National Organization for Public Health Nursing reported a growth of malnutrition patients from eighteen per cent of total admissions in 1928 to the startling figure of sixty per cent by 1931.

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[4] One side of the story is given by Walter Waters, *B.E.F.: the Whole Story of the Bonus Army* (N. Y., 1933); another by Herbert Hoover, *State Papers* (W. S. Myers, ed., N. Y., 1934), II, 242, 274–275, and T. G. Joslin, *Hoover Off the Record* (N. Y., 1934), 269–275. Spurred by the powerful Legion lobby, Congress in January, 1936, overrode President Roosevelt's veto and ordered immediate payment of the bonus. Needy veterans also received special assistance from several New Deal agencies, including the Civilian Conservation Corps and the Works Progress Administration.

"Hog 'n' hominy," so long the bane of Southern poor whites, was now matched in inadequacy by the diet of the new poor in other regions, living on bread, potatoes and beans, with cabbage once a week as a treat. To be sure, restaurant managers often contributed leftovers, bakers their stale bread, and wholesale fruit and vegetable dealers their overripe produce. Truck drivers were known to spill an occasional crate of oranges from their vehicles on the Lower East Side and pretend to ignore the scattered fruit. The acme of degradation was garbage eating, practiced in many cities. Investigators of the Chicago slums in 1932 pictured a scene: "Around the truck which was unloading garbage and other refuse were about thirty-five men, women and children. As soon as the truck pulled away from the pile, all of them started digging with sticks, some with their hands, grabbing bits of food and vegetables."

Upon a minority the worries and struggles of the Depression bore with intolerable effect. The annual rate of increase in admissions to state hospitals for the insane between 1930 and 1932 rose to almost triple that from 1922 to 1930. Inability to take care of mental cases in private homes or private hospitals must, of course, have contributed largely to this growth. But the number of insane per hundred thousand population in New York state registered an abrupt jump in 1932–1933.[5]

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[5] C. J. Enzler, *Some Social Aspects of the Depression* (Washington, 1939), 171. In harmony with previous years, a slow steady increase took place from 439.2 insane per hundred thousand in 1929 to 447.6 in 1931, thence a sudden rise to 458.3 in 1932, and 472.3 in 1933. The next year showed a slight loss in rate of acceleration, but a general increase continued through the decade. *World Almanac for 1943*, 883.

An expected sensational increase in the suicide rate following the stock-market crash was not, however, borne out by the facts. In October and November, 1929, New York City reported only 219 suicides, as against 223 for the corresponding period in 1928; but the annual national rate, of 14 per hundred thousand in 1929, rose steadily to a record high of 17.4 in 1932, then gradually ebbed to 14.2 in 1936.

It was apparent that men felt the brunt of economic failure much more than did their wives, that suicide predominated at both extremes of the financial scale but especially the upper, and that change from high to low estate provoked self-destruction more often than did poverty in itself. As a final index of desperation, it might be remarked that the number of deaths necessitating burial at public expense doubled in 1931 over 1929, to reach a ratio of about one in ten, while in rural districts the number of homemade coffins increased.

Discussion and Writing

> Study the selection as you would a lesson in history. Indicate by underlining and placing Roman numerals in the margins what major topics are taken up. Be prepared for an examination on the material. Make a list of about ten good examination questions that you might be asked.

EARL KIRMSER · *Why Not Dirt Houses?*

A house built twenty-five years ago at Cabin John, Maryland, a suburb of Washington, D. C., attracted an unusually interested crew of "sidewalk superintendents." These onlookers watched the house-owner-to-be take the dirt from the cellar excavation and pound it into frames to form walls eighteen inches thick. They were sure the house wouldn't last. It was a two-story house in the Dutch colonial style, and the roof which the dirt walls were to support weighed eighteen tons. The betting was that in a year or two the roof would be settling down over a mud pile.

That house, one of few built in recent years in the United

—From *The American Mercury,* July, 1947. Reprinted by permission of *The American Mercury* and the author.

States of rammed earth, is still standing, and the walls are in good shape.

Durability is one of the strong points of rammed-earth construction. A rammed-earth church building at Sumter, South Carolina, with walls forty feet high, is nearly a century old; it has survived earthquake (1886), hurricane (1895) and tornado (1903). St. Augustine, Florida, has a rammed-earth house almost four centuries old. In the Rhône River area in France there are rammed-earth houses which have stood for nine hundred years and are still habitable.

Rammed-earth construction has a good many attractions: the materials are abundant and cheap; unskilled labor can do the job easily and quickly; the results are strong, fireproof, heat-and-cold resistant, vermin- (including termite) proof and, to a high degree, soundproof. The use of rammed earth does not involve sacrifice of architectural beauty: houses of many styles can be built of rammed-earth. Natural soil pigments can be mixed in with earth for exterior decoration, and interiors can be painted, whitewashed or plastered, though not always papered.

Building a rammed-earth wall is a simple process. A wooden form is needed, something similar to that used for pouring concrete, but a single section is sufficient. When the form is rammed full, it can be moved alongside or above the completed portion of the wall to allow further ramming. The rammer is merely a handle with a weighted metal head.

The earth selected for ramming must be loose and moist—but not wet—free of roots, large stones and clods. Earth is thrown inside the form to a depth of four or five inches and workers standing inside the form tamp or ram this earth down to solidity. The resulting hard layer will be about two inches thick. After one layer is rammed into solidity, loose earth is again thrown inside the forms, and the process is repeated.

Rammed-earth walls are strong enough while in the process of construction to bear the weight of the workers and the forms, and there need be no waiting period before the roof is added.

II

The National Bureau of Standards has tested rammed earth and four other types of earth-wall construction. These were adobe, bitudobe, monolithic terracrete and terracrete blocks. Adobe is dried mud brick. Bitudobe is adobe plus a bituminous stabilizer. Terracrete is rammed-earth cement made by mixing in a small amount of Portland cement.

The Bureau reported:

> The adobe, bitudobe and rammed-earth walls carried compressive loads up to 100 pounds per square inch; the terracrete walls were much stronger, carrying compressive loads up to 800 pounds per square inch. . . . All of the walls withstood transverse loads, such as are produced by the wind, of 54 pounds per square foot or more. The performance under impact was better than that of many types of masonry walls, and like masonry walls the earth walls resisted concentrated loads extremely well, except near sharp corners. The racking strengths [wind blowing against intersecting walls produces a "racking load"] of the adobe, bitudobe and rammed-earth walls were of the order of 2000 to 3000 pounds per foot, while those of the terracrete walls were greater than 6250 pounds per foot. These values may be compared with 2000 pounds per foot for conventional frame construction, and 3000 to 4000 pounds per foot for tile or cement block construction.
>
> From the point of view of the structural properties, all five forms of earth construction are quite satisfactory for one- and two-story houses, provided the work is done by persons who have had some training and the composition and moisture content of the earth used are controlled within suitable limits.

The Farm Security Administration, which has built a test group of seven rammed-earth homes at Gardendale, Alabama, found rammed-earth blocks capable of bearing 33 tons a square foot and the finished walls able to hold up 10 to 20 tons a square foot, which it said was from 10 to 20 times the maximum load ever put on the wall of a house.

It has been estimated that 80 per cent of the soils in the United States are suitable for rammed-earth construction. Extensive experiments conducted over fifteen years at South Dakota State College have defined the best ramming soil as one consisting of 75 per cent sand and 25 per cent clay and silt, with about 10 per cent moisture content. Test blocks of rammed earth containing more clay have stronger initial strength (one such block, nine inches on a side, withstood 877 pounds pressure per square inch); but a more sandy soil reduces shrinkage, produces a better finish in the wall and increases resistance to weathering.

While it is best to find the soil already properly mixed by nature, it is simple and practical to add the proper elements to soil at the building site in order to bring the earth to optimum ramming conditions.

The Dakota tests showed that rammed-earth walls increase in strength with age, sometimes as much as 45 per cent in the first two years.

III

How does rain affect rammed earth?

The test structures built at South Dakota State College, for which the best soils were used, are expected to last indefinitely without protective covering of any kind on the face of the walls. Driving rains wear away rammed-earth exteriors somewhat during the first two years but have little effect on them thereafter. A rammed-earth home near Washington, D. C. (where the normal annual rainfall is 42.3 inches) has remained in good condition for nearly 20 years; the walls of this house were erected on weekends by inexperienced labor under the direction of the owner, not a professional builder.

The South Dakota experimenters nevertheless believe that most soils used for rammed-earth construction should have a protective cover, such as stucco or plaster. The Bureau of Standards, whose test soils were not of the best as defined by South Dakota experiment results, reported that earth walls must be protected against erosion by driving rains. Terracrete walls showed greater resistance to such erosion.

A rammed-earth wall is vulnerable to moisture seeping into it by capillary action from the ground, which means that it is necessary to give it a good concrete foundation (preferably waterproofed at the top) at least as wide as the wall.

Some confusion of language surrounds testimony about insulating qualities. The Bureau of Standards reported the "rate of transfer" through earth walls to be "about the same as that through ordinary concrete of the same thickness." But it added that earth walls have high "heat capacity" which aided in reducing fluctuations in temperature. Besides, rammed-earth walls are customarily built to greater thickness than walls of more conventional construction. The Farm Security Administration's tests indicated that the "thermal conductivity" of walls in the Gardendale houses was practically zero, and that the dwellings were "exceptionally cool in summer and easily and cheaply heated in winter."

Because labor is the biggest factor, costs of rammed-earth house construction are extremely variable. At Oklahoma Agricultural and Mechanical College, a small home (five rooms, bathroom, two porches), complete with plumbing, lighting and all finishing, was built in 1936 for $887.80. At the prevailing union labor scales that same year, the Farm Security Administration's three-bedroom houses at Gardendale, Alabama, cost $2750 (materials $1050, labor $1700), the two-bedroom homes $2050 (materials $750, labor $1300). Factory workers, pooling their own labor in evening work in a cooperative rammed-earth housing project near Detroit in 1942, figured the cost for a two-bedroom dwelling at $1700.

The Farm Security Administration decided that the use of rammed-earth made possible "a house which can be built in some areas and under certain conditions for approximately two-thirds of the cost of frame dwellings of comparable space and functional design." Costs of other fireproof construction have been held to be as much as three times greater than those for rammed earth. On the other side of the picture, a builder in Salinas, California, found no economy in rammed-earth construction: his workers, averaging two-thirds cubic yards per eight-hour man-day for twelve- and fifteen-inch steel-enforced rammed-earth walls, were paid $1.65 an hour. In a high-priced labor market, rammed-earth construction is cheaper only if the builder:

1. Uses the spare-time, free labor of himself and his family;
2. Is a participant in, or beneficiary of, a large-scale housing project which can benefit from mutual self-help labor, or the organization of experienced crews or machinery to cut down the labor cost.

Little has been done to mechanize rammed-earth construction, but tests at the University of California have shown that a construction speed of seven cubic feet per man-hour can be attained with mechanical rammers, as against two cubic feet per man-hour for hand-ramming by an experienced crew.

IV

The principal barrier to widespread use of rammed-earth housing in the United States seems to be ignorance.

A poll taken of fifty-three city building inspectors brought these results: twenty-two said they had never heard of rammed earth, and thirteen reported that they knew of it only in vague, general terms.

Requests for rammed-earth building permits are practically non-existent. In any case, most city building codes would not permit it. There are more than two thousand city building codes in this country, and most of them require specific kinds and dimensions of materials; rammed earth is not recognized as a building material.

Louisville's chief building inspector replied to an inquiry: "This type of construction would not be permitted under the building code of Louisville or that of any other incorporated city, and in my professional opinion this type of house could only be erected in country districts where no building code demands a properly-constructed building in an accepted term. I cannot possibly see any future for this type of building." In Minneapolis the answer was: "No one has been crazy enough to apply for such a permit." But a Tallahassee building inspector stated his belief that rammed earth might be successful in areas where labor costs are low, where a suitable soil mixture is available, and where the annual rainfall is not more than twenty inches.

Organized building-trades labor would probably be opposed to any widespread adoption of rammed-earth construction just as it has already indicated opposition to prefabrication. (It should be noted, however, that labor's share of the expenditure for a rammed-earth house is proportionately high, although the need for skilled craft labor is less.)

Government mortgage-insurance agencies are reluctant to consider rammed-earth houses a good risk.

Answering Henry Hassey, a Maplewood, N. J., resident who has subjected the Federal Housing Administration to a mail bombardment of several years' duration on this subject, the Federal Housing Authority has stated that there is a lack of "general public acceptance" of rammed earth, and a difficulty—"in the absence of long time successful experience in constructing walls by this method"—of exercising the "necessary control" over the "selection and resulting composition of the material."

At the same time the FHA admits that other government departments "in some instances" have encouraged rammed-earth construction. (As indeed they have, including the Farm Security Administration, the Office of Indian Affairs, the Department of Agriculture and the Bureau of Standards.) The FHA nevertheless refuses to insure mortgages on rammed earth because "we believe it is extremely difficult to accurately predict its soundness and durability."

Commenting on a proposal by Mr. Hassey that the government sponsor a housing project employing rammed earth, the National Housing Agency's technical director recently said: "At the present time there does not seem to be any ready form of testing equipment which will permit an analysis of the soil to ascertain whether any given earth will make satisfactory rammed-earth construction." (While not equipped to handle testing on a mass basis, the South Dakota State College agricultural engineering department has been conducting laboratory tests of soil samples, using a hydrometer method developed at Michigan State College.)

It would appear that the time has come for the various government agencies concerned with housing construction to agree on some consistent attitude toward rammed earth. It is not a new, untried method for wall construction, and it offers, at a time of acute housing shortage traceable in considerable part to building material shortages, a largely unused, abundant source of material.

Discussion

1. To what degree is the article informational, to what degree argumentative?
2. Would you, if you were the final zoning authority in your community, allow the building of dirt houses in all residential sections, on the basis of the data given by Mr. Kirmser? Explain your answer. Would you recommend that loans equal to those on other types of housing be made on them?

Writing

A. Write a theme describing a process, including in it some explanation of the advantages of the process or of the result of the process. Sample subjects: how to make a particular kind of fish lure, how to cook some kind of dish, how to train a dog for hunting, how to plant a flower bed.

B. Write a theme about some process which is contrary to common practice or custom: an unorthodox method of preparing a certain food, an unusual offense or defense in basketball or football, a perverse method of putting or using irons in golf, a different technique in fishing or hunting, a controversial method in the conservation of wildlife or resources.

EVELYN MACLAURIN · *Teach Them to Drive*

With one exception which should live in history ("I dozed at the wheel!") drivers blame anything but themselves. They blame the car, the weather, the sun's glare, the darkness, approaching headlights, their eyesight, their work, worries, wives, the car radio, the backseat driver, a hangover, the road, the other driver, the garage man, the pedestrian. But facts are stubborn things, and the fact is—90 percent of all accidents are directly attributable to a driver.

By and large, it should be said, Americans are the best drivers in the world. We ought to be. We have the best cars. We own seven tenths of all the cars in the world. We have the best and longest highways in the world. We are good drivers as drivers go. But there was a toll of 33,700 killed and over a million injured last year—forceful evidence that we are not good enough. The National Safety Council's report says these accidents are almost 100 percent unnecessary. Our highway accident record is a national shame.

We had the skill and the energy to build the cars and the

—From *Survey-Graphic*, September, 1948. Reprinted, with omission of two short passages, by permission of the author.

roads. Haven't we the skill and energy to control this Frankenstein which we have made? Or shall we continue the "hit-and-miss" method—grant licenses to anyone who has the price and can pass a routine test, and score a million hits and no one knows how many lucky misses?

Amos E. Neyhart, administrative head of the Institute of Public Safety, Pennsylvania State College, and spark plug of the AAA Driver Training program, said recently, "The accident rate, bad enough before the war, is increasing. It is my conviction, after fifteen years of experience and observation, that the solution is to be found in education." For the past ten years the American Automobile Association, through its branches in every state, has been carrying on an intensive campaign for traffic safety education.

What do the experts mean when they say education is the only real solution? They mean that in a rapidly accelerating motor age all 140,000,000 of us need educating. We are a nation on wheels; in these days, every adult should know how to drive a car. In pedestrian education, highway engineering, traffic laws and their enforcement, we have made good progress and must continue to do so. But we have neglected one basic factor in a rounded safety program: we have failed to educate the driver. Optional driver education in a few high schools here and there across the country is not enough.

Each year the AAA issues a state-by-state progress report, optimistically headed "State Regulation of Safety Education in the United States." While some states have made consistent progress, with results reflected in lowered accident records, the 1947 report reveals that:

1. In 32 states, there still is no law requiring the teaching of safety.
2. In 22 states, the state board of education does not require the teaching of safety.
3. In 33 states, teacher-training in safety is not required.
4. In only one state, New York, is there a law requiring all students of both public and private schools to take such instruction, though North Dakota requires all high school students to pass an examination in safe driving before graduation.

This is meager progress for ten years' effort, and it shrinks with a closer look. Comparing it with the report for the previous year, we find no change except in the names of some of the school superintendents.

One more look. Even when an adequate course is provided under specially trained teachers, only a single state—New York—makes it compulsory for all. A great many considerations—taste, need for credits, schedule, and so on—determine a student's choice of optional courses. Frank W. Hubbard, director of the National Education Association's Research Division, estimates that today only about 10,000 of our total of 6,000,000 high school students are getting driver education.

Yet many a state syllabus makes a plausible showing. Complacently we say we are "educating our young people for living." The sad truth is we are educating some 33,000 of them every year for premature and unnecessary dying. During the ten years since the AAA started its campaign, 12,000,000 students have left high school who might have been trained to be good drivers. During that time, 325,000 men, women, and children have been killed on our highways.

Mr. Hubbard sent questionnaires to 8,000 city and rural school superintendents. Of those who replied, 80 percent offered no course in driver education. Only 441 school systems reported some such training. Reasons cited for failure to give driver education were:

	Rural	*City*
Lack of cars and other equipment	62.9%	69.0%
Lack of trained teachers	60.7	52.8
Lack of public demand	44.7	40.3
Curriculum too crowded	41.0	39.6
Cost too high	26.5	23.0

But the facts are:

The AAA supplies safe dual-control cars for teaching purposes free to high schools which undertake adequate courses; it also provides free teacher-training. (For detailed information, write the AAA, Mills Building, Pennsylvania Avenue and 17th Street, N. W., Washington 6, D. C.)

Should school superintendents follow or help stimulate public demand? One I interviewed even went so far as to say that driving courses should wait until the students request them!

The "crowded curriculum" explanation came in as a hardy perennial when the Three-R's variety of education went out. But is it not part of a superintendent's job to discard from time to time subject-matter which becomes outmoded, and replace it with knowledge that is more significant? As Arnold Bennett pointed out, we always find time to do the things we want to do.

Similarly, we always find money to do the things we want to do. Last year, we in this country spent two and a half times as much for liquor as for education; one out of every six drivers involved in fatal accidents, and one out of every four pedestrians killed, had been drinking. The Travelers' Insurance Company estimated the cost of highway accidents last year at $2,500,000,000—more than the total cost of operating our entire public school system for the same period. Driver education in high schools would cost only a small fraction of that—about $31.40 per pupil, a total of $188,400,000 or about 7 percent of the highway accident cost.

We always seem to forget that every accident involves a driver. A good driver often can avoid accidents when a pedestrian is to blame, and even when there is a mechanical failure. If a driver is found guilty we fine him or put him in jail, but that does not make him a good driver. What does make a driver a capable driver? When and how should we train him?

To answer these questions, the AAA got together experts from all over the nation: psychologists, engineers, educators, sociologists, specialists in optics, acoustics, physics, physiology, and other pertinent sciences. They jointly produced the five illustrated texts of the "Sportsmanlike Driving Series," providing a comprehensive course, which is supplied below cost—a notable public service.

"We must educate the driver," say these experts, "before we let him drive at all." The psychological moment for this is the time when he most wants to learn, that is, just before he reaches driving age. The usual age for granting a driver's license is sixteen. (It is younger in eleven states, older in seven and in the District of Columbia.) Sixteen is also the usual school-leaving age. Finally, it is the one time when we can give young people efficient and economical class instruction—and require them to take it. If we really want good drivers, the method is clear: a required course in every public high school for every student, which he must complete the year he reaches his state's age for a driver's license.

A course in safe driving has two parts: classroom instruction and road practice. The first requires a minimum of thirty-six hours of classroom work plus street observation projects, spread over about one school year. The second requires ten hours' behind-the-wheel instruction, spread over about two months, using dual-control cars in practice-driving areas. With the permission of state authorities, the road practice, including various physical and driving tests, could be given during summer holidays. This would save school time. Police motor-vehicle departments are alert to the value of this training, and accept the AAA Sportsmanlike Driving Certificate in lieu of their own drivers' tests.

As to the results of training, the evidence is overwhelming. In Rhode Island the driving record of 1,027 trained high school boys and girls over a three year period showed an absolutely clean slate. Surveys have been made in New Jersey, Pennsylvania, Cleveland and elsewhere. Always the testimony is the same: driver education cuts the accident rate. . . .

Experts know that mechanical skill in handling a car is least important of the seven qualifications of a good driver—attitude, mental fitness, knowledge, judgment, skills, habits, physical fitness. But foremost among the seven is mental attitude. Of all the accidents attributable to the driver, 80 percent are caused by wrong mental attitudes, that is, defects of character. These are not to be eradicated overnight, nor by amateurs.

The best cooperation parents can offer in this situation is to insist upon immediate, compulsory, uniform, nationwide driver education for every student, with adequate equipment and specially trained teachers.

The high schools, senior and junior, will take care of most of the teen-age drivers before they acquire bad driving habits, or are eligible for first licenses. The usual age for entering junior high school is twelve. In most states most of the pupils remain in school until they are sixteen. Somewhere between these two ages, a driver-training course should be provided and required. It will be more difficult to teach the old dogs new tricks. But there is no reason why this program should not be expanded, through evening and summer schools, to include all persons applying for first licenses or renewals.

Once started, the scheme would be increasingly effective. Thus, in imagination, let us line up our 60,000,000 licensed drivers according to age, sixteen-year-olds at the left, over-sixty-fivers at the right. Every year about half a million oldsters at the right drop out, along with members of those accident-prone groups, the show-offs, the speed fiends, the road-hogs, and the alcohol addicts. Every year about 1,200,000 trained drivers from our high schools would get into line at the left. Think how the quality of that line would improve!

With uniform driver education required of every high school student in the U.S.A., with road training required by law for every first license and, if tests show the need for it, for every renewal, in one decade we could reduce the traffic accident problem to reasonable proportions—and go on reducing it.

The first step is to get enough teachers trained—one for each 3,000 pupils. Experienced teachers, given this additional training, can serve as instructors for others. During the teacher training phase, principals can adjust curricula, requirements, and credits; parent-teacher associations provide for cars, and persuade city authorities to construct or set aside a practice area (this in itself will reduce accidents by keeping learners off the streets). At the next session, every state legislature which has not yet done so can make driver education compulsory, and permit the granting of licenses to trained drivers only.

There is a graver aspect to this matter, which we ignore at our peril. Some psychiatrists hold that we Americans take a perverse pride in our accident record, as a symbol of speed and "nerve." They also hold that love of power is in fact a national trait, and a dangerous one.

These same uncontrolled urges that deal out death on highways cause other—and even more devastating—kinds of disaster. We have not solved the accident problem in fifty years. We have never tamed the power-lust. Driver education is the one course in all our educational program which affords an opportunity to teach the students at an impressionable age to control themselves when in control of power. Thus, the plan proposed here promises by-products of far reaching importance. And for the immediate problem—the appalling toll of highway accidents—there is one final solution: teach them to drive.

Discussion

1. What is the value to the argument of the first paragraph ("With one exception which should live in history")?
2. What evidence is offered that the problem of safe driving is a serious one requiring special action? Why is this evidence presented early in the essay?
3. Does the author dispose of the major objections that might be raised against a plan of compulsory driver training in the schools? What are her main arguments in favor of her specific plan? Can you think of major objections to her plan that she has not disposed of?
4. Was it worth while to give some details about the driving course proposed?
5. Was it wise to conclude with the assertion that driver training can have a broadly educational effect, since the writer's main purpose is to cut down the number of traffic accidents?

Writing

Write a brief argumentative theme on a definite, limited problem, in which you use all available statistics and reason as objectively as the author of "Teach Them to Drive." The following topics, which may be treated affirmatively or negatively, are suggested: Students should be allowed to have automobiles at college; Final exams should be abolished; People over 65 years of age should be allowed to vote; The institution of the dowry should be revived; The Federal Government should grant scholarships for college to all outstanding high school students.

SAM SHULSKY · *America's Traffic Headaches*

Not a single city of any size in the United States even claims to have solved the automobile parking problem. The problem has evoked a vast amount of fuss and furor and a flood of ingenious schemes. Cars are being stacked away in tall buildings, jammed into empty lots and crammed into subterranean warehouses. But our mid-town streets are now more cluttered than ever before. Traffic has been slowed to a walk, even though three to four million Americans are still waiting for their first postwar cars and even though the auto count is down by several more millions through nonreplacement of worn-out vehicles.

Within the next year or two everyone who can afford an auto will be able to buy one. More and more cars will be honking for the right of way and for places to park. Traffic engineers forecast that we will have forty to fifty million automobiles. But our streets will be no wider.

Traffic engineers are the first to admit that there is no easy road to perfect parking. A recent poll of 200 cities (including some of only 25,000 population) brought replies which led the Institute of Traffic Engineers to declare that "all of them are worried about the traffic problem." In Milwaukee, motor traffic is 92 per cent above wartime levels. New York, Chicago and a host of other centers report it is up 50 per cent and more. Plainfield, N. J., with a population of about 35,000 finds traffic congestion and lack of parking space so serious that vehicle movement in the center of town is all but impossible. The mayor of a Minnesota country town of less than 1000 population complains: "Main Street on Saturday nights is blocked by cars parked two and three deep. We can hardly cram any more cars into the road and traffic barely moves." The American Society of Civil Engineers sums up the problem when it describes the increasing nation-wide traffic jam as "a malady menacing the cores of American cities, threatening the whole urban organism and causing an economic loss of $2 billion a year."

—From *The American Mercury*, February, 1948. Reprinted by permission of *The American Mercury* and the author.

The cause of this malady is obvious. Parking cars is a problem in elementary space measurements which, even though it is on a single plane, has given our best engineering minds some prodigious headaches. Today's automobile, luxuriously spread out fore and aft, requires nearly 200 square feet of parking space when it is sidled into place by a skilled garage attendant. If the owner does the parking, the required space is apt to be closer to 250 square feet. (The American motoring public, moreover, has shown that it won't buy Europe's midget cars, even during a period of emergency.) In the heart of the modern American city—and parking surveys have established that a motorist doesn't want to walk more than 1000 feet after parking his car—the space needed for parking a full-sized car commands rentals running into thousands of dollars a year. And, very simply, that's why the automobile owner can't rent the space for a dollar or two a day. Moreover, that's why everyone complaining about the lack of parking space wants *someone else* to do something about it. That "someone" is usually the city government or one of its specially-created agencies—a traffic or parking authority—which can, presumably, lose money without having anyone in particular make it up.

Those who pursue this line of argument rely for support on the experiences of a very few cities which have tried to do something about the parking mess, even though on an experimental basis and with highly indecisive results. San Francisco, for example, with an automobile census of more than 175,000 got nationwide publicity by providing space for 1700 of them in a garage built below a midtown park. Detroit, with 408,000 automobiles, is thinking of a similar underground space for 1000 vehicles; Los Angeles with nearly 500,000 cars, is planning space for 2700. Cleveland, with an auto count of 255,000, reports in a survey that it accommodates 700 in an underground exhibition hall—when the hall is not otherwise occupied. Montclair, N. J., has just appropriated $168,000 for three lots with a total capacity of 250 cars, and Grand Forks, N. D., is bravely facing the problem by opening a city-owned lot accommodating 45.

In other words, every community of any size is making some effort—substantial or otherwise—if only to be able to say: "You see, we admit the auto is here to stay and we are doing something about parking it."

II

But, unfortunately, the jam, far from being broken, gets worse daily. The American Society of Civil Engineers recently asked 23 cities in the United States and two in Canada, all with populations above 100,000: "How much relief has your city obtained from traffic congestion during the past 12 months?" The replies were not very encouraging:

"We have tried to do many things, but I doubt whether there has been much accomplished."

"We have been able to accomplish practically nothing in relieving congestion. A traffic survey was proposed and abandoned."

"Authorities have done very little, if anything. . . . A great deal of field data has been accumulated and traffic recommendations are in the offing, but meanwhile the situation has grown worse."

New York City, with a native automobile population of about 750,000, and with more than half that many again streaming into the city daily, is, of course, the world's best example of how a city can become hopelessly caught in traffic jams. Thanks to years of highway planning, Manhattan Island is one of the easiest centers in the world to get to. There are the East Side and West Side express roads, bridges and ferries over the rivers and tunnels under them. But once the motorist reaches the metropolis he finds himself enmeshed in a spider's web from which there is no escape. The late Will Rogers, back in the days when cars were plentiful, used to advise: "If you ever find a place to park your car in New York, don't move it. Leave that car there for parking purposes and buy another one for driving around."

The New Yorker who thinks he should be able to drive his car right up to the door of Radio City Music Hall naturally calls upon his elected officials to do something about it. Right now the politicians are doing what all politicians can always do, safely and cheaply—talk. They are talking of spending $25 million or $37 million (the exact amount seems to be obscure) to construct 42 garages and parking lots, some above ground, some underground, capable of parking 15,000 automobiles. Assuming that two cars will use a single space every day, this project would accommodate about

30,000 cars, or 2 per cent of the automobiles that move over New York City streets daily.

The problem can be viewed from another angle. In downtown New York there stands the block-square Equitable Building, one of the important buildings in the financial district—but only one of many. It is bounded on the west by heavily-trafficked Broadway and on the other three sides by lanes laid out in Colonial days and barely wide enough for two cars to pass. Yet this 40-story structure (only half the height of the city's taller skyscrapers) has 12,000 occupants and is visited daily by 65,000 persons. If all these people came by car (at the national average of 1.7 riders per private automobile) all New York City's proposed parking lots laid end to end couldn't take care of the traffic at this building alone.

III

New York, of course, is the extreme example of a crowded city. But New York or Sioux Falls, every city is hard pressed to provide space for its motorists. That these motorists should even expect to find space available for their convenience derives from the curious line of reasoning which holds that parking facilities can be operated at a partial, or, if necessary, total financial loss. For, surprisingly enough, in all this talk of curing the parking blight, no one has been found suggesting, with any conviction, that perhaps the question of whether there can be parking for all should be put to the acid test: Can it pay its way? Is it economically sound? Those who call loudest for municipally-provided parking space seem to have forgotten about private enterprise, the economic system under which this country operates.

In fact, it is the Big Business and Private Enterprise interests —real estate and merchandising, to name only two—who are calling loudest for the government to do something. It is these interests who now feel that the city administration is honor bound to provide about 100 square feet of vacant space for every person who wants to rent offices or shop in their stores. These interests built their structures right up to the property line, and they yelled murder when it was suggested that traffic might be expedited if they provided truck loading docks within their buildings and away from the public road. They run their own businesses on the principle: "Let free enterprise determine the price. If people want anything they will pay for it. If the price is too high, they won't buy and the price will have to come down."

But now these groups are demanding help from the city government. There is not a word from them about selling parking space themselves, nor is there the slightest hint that the very congestion which makes their property so valuable may rule out the possibility of providing cheap parking space nearby. They believe, selfishly, that there's going to be an ox gored somewhere and that it might as well be "the taxpayer's." It is high time the taxpayer pointed out that he has no intention of subsidizing auto parking in mid-town Los Angeles, Boston, Utica or New Orleans.

He could further argue, supported by economic law, that there would be no shortage of parking space if the market for it were allowed to find its own level, unaffected by the overhanging threat of municipal, subsidized intervention and if it were freed of stupid zoning laws. What this level would be, of course, would depend on the size of the city, its geographic layout and the driving habits of its motorists. In Buffalo it might be a charge of, say, 75 cents an hour. In Chicago, it might be $2 an hour. In New York's 45th Street west of Broadway, a fee of $5 for the theatre hours of 8:30 to 11 P.M. might well provide all the space motorists would want at that price.

Asking the automobile owner to pay such rates for space would very quickly eliminate about 95 per cent of the demand.

This leads directly to another question:

Is it not possible that the need for parking space has been highly overrated, by both motorists and downtown merchants?

There is some solid scientific research on the side of anyone answering this question in the affirmative. Leslie Williams, City Planning Engineer of the American Transit Association, points out that more private cars used the intersection of Forty-Second Street and Fifth Avenue—the heart of New York City—in 1925 than in 1939, when there were twice as many autos registered in metropolitan New York. But the movement of people and goods at this intersection is greater today than ever before, indicating that a midtown business center needs customers, not cars, to prosper.

Another study conducted by no less partial an organization than the National Retail Dry Goods Association disclosed that in

Philadelphia only 8 per cent of the shoppers in the city's central department stores arrived by private auto, while eleven times that number came by public transportation. The rest of the shoppers walked.

"These facts," said Robert A. Mitchell, chief of Philadelphia's bureau of traffic engineering, "bear out what traffic engineers have believed to be true for many years, that the great bulk of business is done by persons using mass transportation." The taxpayer may well ask: "If 88 of every 100 persons can get to the stores by public conveyances, why should I be asked to put up money to provide for the convenience of the few who insist on the luxury of private transportation?"

IV

The American motorist, who still looks upon his car as his magic coach to everywhere, ought to begin forsaking romantic dreams and turn to realism. He will have to learn to look upon parking in the city as a comfort just about as difficult to come by as a backyard vegetable garden, seats in the trolley or bus, privacy in the park, country-fresh air, tree-shaded lawns and wide verandahs. Americans will not take kindly to this point of view, for the auto has become an integral part of family life and often takes precedence over domestic requirements in family finances. But the mental readjustment will have to come, sooner or later. The American motorist has no Constitutional guarantee of the right to park on New York's Fifth Avenue, Boston's Scollay Square or Sauk Center's Main Street, and only the refusal of politicians to give him the bad news has kept the misconception alive.

The private motor car has no more right to parking space in our mid-town business streets than the promoters of old-fashioned block parties. A concert-goer has no more right to park his car outside Carnegie Hall in New York or a night club in Chicago than he would have to tie his horse and buggy there to a lamppost. If he wants to live in a community large enough to support big-city pleasures, he must give up to a large extent the convenience of driving to them in his own car—a privilege he could enjoy to the full when he attended the Saturday night band concerts back home in Wigwam.

Big-city life, it is conceded, has many drawbacks—the crowds, the noise, the dirt, the lack of space and privacy. Everyone who wants to live in the city realizes that these, taken together, are the price he must pay for the advantages of the larger community. Why, then, should a city administration be expected to spend money in catering to the 1.7 occupants of the private automobile when public transportation facilities are themselves in need of improvement throughout the country? By what point of privilege does the motor car owner, who scorns public transportation, raise the demand that city funds be spent for his comfort?

Traffic experts are agreed that the dream of traveling everywhere within the city in an automobile is a physical impossibility. Even the United States, which has a good record of accomplishing "the impossible," cannot ignore the physical law that says no two objects can occupy the same space at the same time. So long as we build cities, so long as we sponsor the concentration of merchandising and amusements, of medical, legal and governmental services, the parking problem is insoluble. There is no prospect of finding mid-town land of such low economic value that it is fit for nothing but auto storage.

It is important that people get to these business centers. But how they get there is not important. Therefore, say the engineers, the only logical solution to inadequate parking space and resultant traffic jams is a reduction in the number of private cars in congested areas. An exhaustive study of Pittsburgh's traffic problems by its regional planning association led to the conclusion that

> mass carriers can transport people in and out of the Triangle [the main business district] more efficiently than the private automobile, both with respect to street space usage and requirement of terminal facilities. In the huge increase in autos anticipated by 1960 every additional customer that can be won by mass transportation will ease the traffic troubles of the motorist and will tend to give added economic stability to the area as a central business and shopping district.

In other words, mass, not exclusive, transportation should be encouraged.

The fifty motorists who now require 29 private cars to get downtown, should be transferred to a single public conveyance at a tremendous saving in street space.

A street which can carry only 2600 persons per hour in private cars must be reserved for trackless trolleys, buses and streetcars. These can transport ten to twelve thousand persons in the same time, and they do not require curb parking space. Thus, two more lanes are automatically opened for traffic.

The ineffectual, half-hearted approach which has distinguished the first quarter century of wrestling with the traffic problem is as outmoded as the hand-operated stop-and-go signal. Instead of creeping up on the problem with all sorts of palliatives and piecemeal nostrums—one-way streets, fifteen-minute parking here (on Mondays and Fridays only) and one-hour parking there (between 1 A.M. and 7 A.M.)—our cities will have to step out boldly.

For example, to end the monstrous traffic confusion which has been snarling New York traffic for years might well require a law forbidding all private pleasure cars to be driven—let alone parked—on Manhattan Island south of Ninety-Sixth Street unless they have police certification of an emergency.

Such an injunction, of course, would prove a severe jolt to many drivers. But it would also clear the streets for the purpose they were intended—to move the most people with the greatest safety and the least inconvenience. Legally, it would only be a reassertion of the English common law which holds that "the King's Highway was not intended to be used as a stableyard."

Discussion

1. What legal principle does the author cite in support of his conclusion? Does the conclusion run counter to any almost universally held notions?
2. Would Shulsky's solution of the traffic problem in New York City be unfair?
3. Compare this essay, as an argument, with those by Kirmser and MacLaurin, pp. 330–337 and 337–343. In your opinion, which of the three is the most convincing? Support your opinion carefully.

SECTION 4 · *Exposition, Analysis, and Criticism*

THOMAS JEFFERSON · *A Natural Aristocracy*

1 I agree with you that there is a natural aristocracy among men. The grounds of this are virtue and talents. Formerly, bodily powers gave place among the *aristoi.* But since the invention of gunpowder has armed the weak as well as the strong with missile death, bodily strength, like beauty, good humor, politeness and other accomplishments, has become but an auxiliary ground for distinction. There is also an artificial aristocracy, founded on wealth and birth, without either virtue or talents; for with these it would belong to the first class. The natural aristocracy I consider as the most precious gift of nature, for the instruction, the trusts, and government of society. And indeed, it would have been inconsistent in creation to have formed man for the social state, and not to have provided virtue and wisdom enough to manage the concerns of the society. May we not even say, that that form of government is the best, which provides the most effectually for a pure selection of these natural *aristoi* into the offices of government? The artificial aristocracy is a mischievous ingredient in government, and provision should be made to prevent its ascendency. On the question, what is the best provision, you and I differ; but we differ as rational friends, using the free exercise of our own reason, and mutually indulging its errors. You think it best to put the *pseudo-aristoi* into a separate chamber of legislation, where they may be hindered from doing mischief by their co-ordinate branches, and where, also, they may be a protection to wealth against the agrarian and plundering enterprises of the majority of the people. I think that to give them power in order to prevent them from doing mischief, is arming them for it, and increasing instead of remedying the evil. For if the co-ordinate branches can arrest their action, so may they that of the co-ordinates. Mischief may be done negatively as well as positively. Of this, a cabal in the Senate of the United States has furnished many proofs. Nor do I believe them necessary to protect the wealthy; because enough of these will find their way into every branch of the legislature, to protect themselves. From fifteen to twenty legislatures of our own, in action for thirty years past, have proved that no

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— From a letter to John Adams dated October 28, 1813, as printed in Frederick C. Prescott's *Hamilton and Jefferson,* 1934.

fears of an equalization of property are to be apprehended from them. I think the best remedy is exactly that provided by all our constitutions, to leave to the citizens the free election and separation of the *aristoi* from the *pseudo-aristoi*, of the wheat from the chaff. In general they will elect the really good and wise. In some instances, wealth may corrupt, and birth blind them; but not in sufficient degree to endanger the society.

2 It is probable that our difference of opinion may, in some measure, be produced by a difference of character in those among whom we live. From what I have seen of Massachusetts and Connecticut myself, and still more from what I have heard, and the character given of the former by yourself, who know them so much better, there seems to be in those two States a traditionary reverence for certain families, which has rendered the offices of the government nearly hereditary in those families. I presume that from an early period of your history, members of those families happening to possess virtue and talents, have honestly exercised them for the good of the people, and by their services have endeared their names to them. In coupling Connecticut with you, I mean it politically only, not morally. For having made the Bible the common law of their land, they seem to have modeled their morality on the story of Jacob and Laban. But although this hereditary succession to office with you, may, in some degree, be founded in real family merit, yet in a much higher degree, it has proceeded from your strict alliance of Church and State. These families are canonised in the eyes of the people on common principles, "you tickle me, and I will tickle you." In Virginia we have nothing of this. Our clergy, before the Revolution, having been secured against rivalship by fixed salaries, did not give themselves the trouble of acquiring influence over the people. Of wealth, there were great accumulations in particular families, handed down from generation to generation under the English law of entails. But the only object of ambition for the wealthy was a seat in the King's Council. All their court then was paid to the crown and its creatures; and they Philipised in all collisions between the King and the people. Hence they were unpopular; and that unpopularity continues attached to their names. A Randolph, a Carter, or a Burwell must have great personal superiority over a common competitor to be elected by the people even at this day. At the first session of our legislature after the Declara-

tion of Independence, we passed a law abolishing entails. And this was followed by one abolishing the privilege of primogeniture, and dividing the lands of intestates equally among all their children, or other representatives. These laws, drawn by myself, laid the ax to the foot of pseudo-aristocracy. And had another which I prepared been adopted by the legislature, our work would have been complete. It was a bill for the more general diffusion of learning. This proposed to divide every county into wards of five or six miles square, like your townships; to establish in each ward a free school for reading, writing, and common arithmetic; to provide for the annual selection of the best subjects from these schools, who might receive, at the public expense, a higher degree of education at a district school; and from these district schools to select a certain number of the most promising subjects, to be completed at an University, where all the useful sciences should be taught. Worth and genius would thus have been sought out from every condition of life, and completely prepared by education for defeating the competition of wealth and birth for public trusts. My proposition had, for a further object, to impart to these wards those portions of self-government for which they are best qualified, by confiding to them the care of their poor, their roads, police, elections, the nomination of jurors, administration of justice in small cases, elementary exercises of militia; in short, to have made them little republics, with a warden at the head of each, for all those concerns which, being under their eye, they would better manage than the larger republics of the county or State. A general call of ward meetings by their wardens on the same day through the State, would at any time produce the genuine sense of the people on any required point, and would enable the State to act in mass, as your people have so often done, and with so much effect by their town meetings. The law for religious freedom, which made a part of this system, having put down the aristocracy of the clergy, and restored to the citizen the freedom of the mind, and those of entails and descents nurturing an equality of conditions among them, this on education would have raised the mass of the people to the high ground of moral respectability necessary to their own safety, and to orderly government; and would have completed the great object of qualifying them to select the veritable *aristoi,* for the trusts of government, to the exclusion of the pseudalists; and the same Theognis who has furnished the epigraphs of your two letters, assures us that Οὐδεμίαν πω, Κύρν', ἀγαθοὶ πόλιν ὤλεσαν ἄνδρες.[1]

3 Although this law has not yet been acted on but in a small and inefficient degree, it is still considered as before the legislature, with other bills of the revised code, not yet taken up, and I have great hope that some patriotic spirit will, at a favorable moment, call it up, and make it the keystone of the arch of our government.

4 With respect to aristocracy, we should further consider, that before the establishment of the American States, nothing was known to history but the man of the old world, crowded within limits either small or overcharged, and steeped in the vices which that situation generates. A government adapted to such men would be one thing; but a very different one, that for the man of these States. Here every one may have land to labor for himself, if he chooses; or, preferring the exercise of any other industry, may exact for it such compensation as not only to afford a comfortable subsistence, but wherewith to provide for a cessation from labor in old age. Every one, by his property, or by his satisfactory situation, is interested in the support of law and order. And such men may safely and advantageously reserve to themselves a wholesome control over their public affairs, and a degree of freedom, which, in the hands of the *canaille* of the cities of Europe, would be instantly perverted to the demolition and destruction of everything public and private. The history of the last twenty-five years of France, and of the last forty years in America, nay of its last two hundred years, proves the truth of both parts of this observation.

5 But even in Europe a change has sensibly taken place in the mind of man. Science had liberated the ideas of those who read and reflect, and the American example had kindled feelings of right in the people. An insurrection has consequently begun, of science, talents, and courage, against rank and birth, which have fallen into contempt. It has failed in its first effort, because the mobs of the cities, the instrument used for its accomplishment, debased by ignorance, poverty, and vice, could not be restrained to rational action. But the world will recover from the panic of this first catastrophe. Science is progressive, and talents and enterprise on the alert. Resort may be had to the people of the country,

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[1] Not yet, Kurnus, have good men destroyed a state. [Editors' note.]

a more governable power from their principles and subordination; and rank, and birth, and tinsel-aristocracy will finally shrink into insignificance, even there. This, however, we have no right to meddle with. It suffices for us, if the moral and physical condition of our own citizens qualifies them to select the able and good for the direction of their government, with a recurrence of elections at such short periods as will enable them to displace an unfaithful servant, before the mischief he meditates may be irremediable.

Discussion

1. The contemporary reader may find some unusual diction in Jefferson's prose. Study the following words and phrases in their contexts, as located by the paragraph numbers given. If you do not clearly understand them, consult a good dictionary.
   co-ordinate branches, cabal (1); *the story of Jacob and Laban, canonised, secured against rivalship, collisions, primogeniture, intestates, subjects, completed, warden, sense of the people, moral respectability* (2); *crowded within limits either small or overcharged, and steeped in vices which that situation generates, subsistence, satisfactory situation* (4); *sensibly, feelings of right, resort may be had* (5).
2. What distinction does Jefferson make between a natural and an artificial aristocracy?
3. What is the relation between Jefferson's proposed scheme of education and the ideal of a natural aristocracy?
4. Was Adams in favor of developing a natural aristocracy? Point out the passage which supports your view.
5. What differences of experience does Jefferson see as a probable explanation of the disparities between his views and those of Adams?
6. What, according to Jefferson, hindered the development of a natural aristocracy in Europe? Did he believe that one could evolve there?
7. What are the outstanding characteristics of Jefferson's writing? Point to particular passages to support your statements. What does the style reveal about the author and the person addressed?

NATHAN SCHACHNER · *The Legacy of Alexander Hamilton*

Around no other American have the storms of controversy flared and thundered with such violence as around the short, electric figure of Alexander Hamilton. The lapse of a century and a half has done nothing to soften the passions or allay the conflict. He is still hailed on the one hand as "an American colossus" and "the greatest American," and attacked on the other as "the arch-reactionary" and "the idol of Wall Street."

The reasons for this continuing exacerbation of temper are not far to seek. The issues over which Hamilton and his opponents fought so bitterly are fundamental in the history of the United States—perhaps in the history of the world. They have the same relevance in the atomic age as in the horse and buggy days.

For better or for worse the America in which we now live was largely shaped by the ideas and activities of Alexander Hamilton, and willy-nilly we still follow along the path on which he first set our stumbling feet. It is essential, therefore, if we wish to understand the forces at work today, that we cut through the fog of partisanship and party clamor which has hitherto enshrouded Hamilton and attempt a revaluation of the man and his policies.

One of the most prevalent misconceptions that surround Hamilton is that he was a hardheaded, practical man of affairs with no nonsense about him, a solid businessman who would have found a secure niche in the National Association of Manufacturers, a single-minded captain of industry who had no truck with romantic gestures or "cloudy" idealism. Nothing is further from the truth.

For Hamilton was a strange compound of two strains that eternally contradicted each other. He *was* hardheaded, practical, clear-cut, and he *did* possess an infinite genius for details. He *did* profess a vast scorn for utopian schemes and windy generalities. But he was also, in effect, a wild romantic, a dreamer of impossible dreams whose most compelling passion was a thirst for glory,

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obsessed to the end of life with a vision of himself as this country's Man on Horseback.

Both strains became visible early. At the age of twelve Hamilton's boyish legs gripped the rungs of a counting-house stool in the West Indies. He ran a large and varied mercantile business during the extended absence of his employer with astonishing success. Yet the youthful clerk, with a notable business career opening full before him, wrote scornfully to a distant friend: "I contemn the grovelling condition of a clerk or the like, to which my fortune, etc., condemns me, and would willingly risk my life, though not my character, to exalt my station. . . . I wish there was a war."

This might be set down to the natural fidgetings of a boy of twelve, were it not for the fact that the same irresistible impulse manifested itself at various later stages of his career. When, during the Revolution, he filled the highly important post of secretarial aide to General Washington, he deliberately picked a quarrel with his commander and resigned because he had been refused permission to charge the enemy at the head of troops of the line. When, as Secretary of the Treasury, his presence was essential at his desk, he forsook such mundane duties to lead in person the army he had gathered to crush the "Whisky Rebellion."

The climax of his career, to Hamilton, came not during his incumbency at the Treasury, but during those few breathless months when he was actually in command of an army that he expected to lead against the French and Spanish possessions in the two American continents. "We ought certainly," he insisted, "to look to the possession of the Floridas and Louisiana, and we ought to squint at South America." When his dreams of conquest and glory were suddenly deflated by John Adams' refusal to be dragooned into war, Hamilton's fury knew no bounds. In his desire to strike back at the man who had kept him from fulfilling those dreams he not only dragged Adams and the Federalist party down in ruins, but also destroyed his own hopes for future political preferment. These were recklessnesses which no canny businessman could possibly have permitted himself.

II

Even in those far-reaching schemes of government and finance which Hamilton devised for the use of the United States and which his conservative disciples never weary of extolling as sound business sense with no nonsense about them, there are touches of audacity and grandiose magnificence that bespeak the true visionary.

What is his famous "Report on Manufactures" but a dazzling blueprint for an America that did not come into existence for more than sixty years after his death? At a time when this nation was essentially a land of small, separate, independent farmers and Jefferson was insisting that it forever continue to be such, Hamilton was envisioning a future of gigantic industrial development, of thriving cities and humming factories, of endless-belt production and a flood of manufactured articles.

Nor did he balk at governmental interference with the sacrosanct processes of industry and commerce. While it is true that most of his recommendations would today meet with the hearty approval of big business—tariffs, subsidies, credit, good roads, etc.—he also proposed strict governmental supervision and inspection of manufactured goods to prevent frauds and shoddy quality!

Even when Hamilton seemed most the businessman, he had in steady view far larger ends than the amassing of wealth by the favored mercantile few. For example, the bankers and business men of today are most lavish in their praise of two things that their idol did—he established the public credit of the United States and he organized a national bank. These were indeed the most famous acts of Hamilton's career, the cornerstones of his fundamental policy. And, in order to bring them to fruition, he had to heap riches and vast unearned increments into the already overburdened laps of the wealthy while he added heavier taxes to the shoulders of the poor. Surely as splendid an example as one could wish of Hamilton's businessman psychology!

For what Hamilton was doing in these two measures was to take the depreciated paper obligations of the United States and of the several states and redeem them at par. It sounds like an ethical procedure, but there were many who did not think so at all. They pointed out certain incontrovertible facts. These paper promissory notes had been issued to the soldiers of the Revolution in payment for wages and to farmers and others in payment for supplies. But most of the recipients were poor folk who lacked present hard cash for their daily living, and couldn't afford to wait the indefinite number of years when, if ever, the scrip could be redeemed. That was where the speculator came in. He cashed these pieces of paper for the needy at discounts as low as twelve cents on the dollar. Accordingly, if the scrip was to be paid off at par, the speculators stood to gain as much as 800 per cent.

But Hamilton insisted that that was the way it was to be done, and no other. He brushed aside all suggestions of turning over the differential to the original holders and allowing to the speculators only what they had actually paid. The scrip was negotiable, was it not? Those who sold and those who bought took their chances. That was sound business. If the rich got richer and the poor paid the piper in the form of increased taxes, that could not be helped.

The redemption bills passed, but not without an ugly clamor. For Hamilton's friends—rich men all—had feathered their nests by buying up all the available scrip on advance notice of the passage. It was boldly asserted that Hamilton had done well for himself also. This last, however, was wholly unfounded. While Hamilton was willing to view with a benevolent eye the enrichment of the rich, he personally touched not a penny of the easy money lying around. When he left the Treasury, he was poorer by far than when he had entered it.

One must, moreover, go behind these seemingly damning facts. It is true that Hamilton wanted the "rich and well-born" to gain possession of the scrip and to cash it in for new United States bonds at par that bore a good rate of interest. It is true that he didn't care much for the poor as poor, or for people in the mass at all. But his primary interest was not in the rich as rich either; they were just as much pawns in the game he was playing as were the unregarded poor. If he favored the rich whenever he could, it was only because he sincerely believed that he required their strong, self-interested support in the single task to which he had dedicated himself with all the burning enthusiasm and mystical ardor of a saintly crusader of the Middle Ages. That task was to build a strong, united nation.

On such a theme he was eloquent, even lyrical. "There is something noble and magnificent," he cried, "in the perspective of a great Federal Republic, closely linked in the pursuit of a common interest, tranquil and prosperous at home; respectable abroad." For the consummation of such a vision he would have enlisted the services of the devil himself. Hamilton had no illusions about the patriotism of the rich. Unless he made it worth their while they would not support his plans. "Make it the *immediate* interest of the moneyed men to cooperate with government," he had written over and over again.

Today, the idea of a strong national government, a united nation of which the states are mere component parts, is taken for granted. In Hamilton's time it was not only a novelty but something to be fought tooth and nail. Jefferson, Madison and their cohorts wanted to grant the Federal government sharply limited powers, chiefly for defense against foreign aggression, and keep the ultimate residual power in the hands of the separate and distinct entities making up the confederation. To these sincere men a centralized nation meant tyranny and absolutism, a rule by "the rich and the well-born."

Here indeed was the crux of the great struggle between Hamilton and Jefferson, a struggle in which a nation was forged. At every step of the way the battle was waged between the two giants. It was a clash over fundamental philosophical ideals. Which was more important: A mighty nation, prosperous at home and respected abroad? Or essential human liberties and the dignity of the individual even at the cost of national weakness in a world of power politics? It is a problem that confronts us even more emphatically today than in 1795. For the ocean that was a barrier then has shrunken to a mill pond in the face of rockets and atom bombs.

III

Hamilton was willing to sacrifice some measure of human liberty to build his nation. Jefferson preferred to jettison the idea of national strength in favor of a free agricultural community of sturdy, independent farmers. They both supported the Constitution because it was a compromise between their divergent views. Hamilton called it contemptuously "a frail and worthless fabric," yet he did more to insure its ratification than any other man. The *Federalist Papers,* in the writing of which he took the major part, have been hailed as the finest essays known on the purposes and nature of government.

Hardly had the Constitution been adopted, however, when Hamilton began to expand and stretch that document until its very fabric cracked. In its own clauses, carefully drafted to limit the power of the central government, Hamilton had to find the powers

Jefferson had sought to limit. The issue was joined on his proposal for a national bank.

Hamilton wanted a national bank, under national auspices, to establish a free flow of government credit and once more to bind the "rich and well-born" by hoops of steel to the nation rather than to the states. For exactly the same reasons the bank was opposed as still another weapon in the warfare between the rich and the poor, between the nation and the states. Its opponents declared vehemently that nowhere did the Constitution grant permission to the Federal government to charter a bank. But Hamilton retorted that the Constitution contained *implied powers.* Of what use was it to give the government the right to borrow money if it was not permitted to establish a source from which it could borrow? What about the clause that gave Congress the right to provide for the general welfare and the one that granted it the right to make all laws necessary and proper for carrying into execution these powers?

The debate developed into one of the greatest constitutional discussions this country has ever seen. Far more was involved than the mere chartering of a bank. The future of the country was at stake. If Hamilton's doctrine of broad and liberal interpretation of the phraseology in the Constitution were adopted, there was a chance that the "frail and worthless fabric" might prove flexible enough to meet all future contingencies. If Jefferson's and Madison's theory of strict construction were followed, the future would have been put into a straitjacket.

Hamilton won; Jefferson lost. Hamilton's arguments were later taken over almost verbatim by Chief Justice John Marshall and became the law of the land. The Constitution became a flexible instrument. Echoes of those ancient arguments are still heard in the halls of Congress and—strangely enough—in the ranks of business. For now that Hamilton's "liberal" interpretation has been used to put through child-labor laws, labor-relations acts and other iconoclastic legislation, the so-called "heirs" of Hamilton have on occasion invoked the once despised arguments of the strict constructionists.

Hamilton won. The nation—as a nation—developed along the lines he had so eloquently laid down. The thirteen separate states were cemented gradually into an indissoluble union. It took a Civil War finally to make that point clear to all and sundry, but today there is no doubt about it even in the minds of our enemies. Hamilton won. The United States moved ahead to become the mightiest and most industrialized country in the world. If he were alive today, he would tread on familiar ground.

At the time, however, he was not so sure, especially after Jefferson's party swept him and his Federalists into the discard. "Mine is an odd destiny," he lamented. "Perhaps no man in the United States has sacrificed or done more for the present Constitution than myself. . . . Yet I have the murmurs of its friends no less than the curses of its foes for my reward. What can I do better than withdraw from the scene? Every day proves to me more and more that this American world was not made for me."

For Jefferson had also won. The structure of the nation was to be Hamiltonian; but the spiritual content became Jeffersonian. *Democracy, government of, by and for the people*—slogans that Hamilton loathed—grew in richness and depth. Even when sinned against, they received at least the homage of universal lip service. "The rich and well-born" no longer—at least openly—rule America as Hamilton would have had them do. The many participate, or have the privilege to do so if they choose to exercise their right.

A just estimate of Hamilton must grant him a vital and essential rôle in the forging of America. Without his vision of unity, strength and industrial development America might never have survived, might perhaps have become a mere congeries of separate little sovereignties, torn by mutual dissensions, devastated by internecine wars, easy prey today for any modern totalitarian empire. An equally just estimate of Jefferson must grant him a similarly essential rôle. Without his humanizing doctrines America might today in turn have drifted into like totalitarian paths.

One thing more posterity, particularly our politicians, might take from Hamilton: a flair for bold, vigorous leadership. Aged nineteen, he copied carefully into his notebook a quotation from the first Philippic of Demosthenes: "As a general marches at the head of his troops, so ought politicians, if I dare use the expression, to march at the head of affairs; insomuch that they ought not to wait the *event,* to know what measures to take; but the measures which they have taken, ought to produce the event." To the end of his life Hamilton never deviated from this advice. Whatever his faults, he led rather than followed.

ARTHUR M. SCHLESINGER, JR. · The Legacy of Andrew Jackson

Andrew Jackson has long been the symbol of fighting democracy in American political life. On the lips of Democratic spellbinders his name is a call-to-arms: Jefferson, the sage of Monticello, is the serene philosopher of democracy, but Jackson is its militant champion, rude, brawling and irresistible. Schoolbook history adds the photo-montage: backwoods Andy Jackson, rough, tough and lusty, hard as nails and irascible as a bumble-bee, defying successively the British, the Indians, the Eastern aristocrats, the United States Bank, the Supreme Court—all in the name of the common people, the unpolished, uncouth, good-hearted rabble, clad in buckskin and flourishing bowie knives, who stormed the White House on the day of his inaugural.

It is a good story; and it ought to be, for enough talents of diverse kinds went into inventing and perpetuating it. As a young man, Jackson was no doubt a roisterer; but he was sixty-one years old on his inauguration as seventh President in 1829. A quarter century on a spacious Tennessee plantation had given him the bearing and instincts of an aristocrat. His manners had long since grown urbane and confident; and his temper had succumbed to the control of ambition, calculation and experience. As one Washington hostess put it, Jackson possessed "quite as much *suaviter in modo* as *fortiter in re.*" Daniel Webster, later to become one of his determined enemies, observed in 1824, "General Jackson's manners are more Presidential than those of any of the candidates. . . . My wife is for him decidedly." (The other candidates that year included John Quincy Adams of the famous Massachusetts family and Henry Clay, the polished and cosmopolitan Kentuckian.) Like Thomas Jefferson and Franklin Roosevelt, Andrew Jackson was a country squire in the White House.

But the opponents of Jackson found it smart politics to spread

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a legend of his crudeness and ignorance. He was portrayed as a senile, semi-literate and impassioned old fool, dominated by a clique of cunning radicals. From this propaganda campaign came such tales as the one that "O.K." originated in Jackson's belief that he was abbreviating the words "all correct." Webster and Clay in their speeches on the Hill developed the same basic picture in more sonorous tones. For many years the leading historians of the period, men in the Whig-Republican tradition, copied their judgments from Webster and Clay, whose oratorical fights they mistook for sober historical analysis. The Jackson myth was thus solidly imbedded in the written history.

In recent years the legend has received support from a new source, supposedly pro-Jackson in character. The cult of the proletariat created a movement to proletarianize all American democratic heroes by a process of retroactive historical interpretation. The stereotype of Jackson fabricated by Whig propaganda in the 1830s thus became a natural for the sentimental leftism of the 1930s. One of the more ludicrous results was the attempt to press Jackson into the service of the Communist Party line—as in *The Merry Andrew*, a novel written by a fellow-traveling Hollywood writer named Dalton Trumbo. In this curious book the ghost of Jackson appears to warn the hero against sinister British attempts to inveigle him into the imperialist war against Hitler and the Nazis. (Needless to say, this book was written before the attack on the USSR disclosed to Trumbo that Hitler was a menace to world democracy.)

The tip-off is the use of the nickname. No one ever called Jackson "Andy Jackson" during his Presidency—at least, in some years of research on the 1830s I never came upon it—but the literary phonies today unfailingly dub Jackson with the folksy "Andy," as their successors in another century will doubtless speak of that great proletarian Frankie Roosevelt.

Jackson was perhaps not quite the symbol of fighting democracy that he has appeared in the schoolbooks. But in a more fundamental sense he remains the classic symbol in American life of the political and economic struggle for the common man. Franklin Roosevelt, who knew his American history, perceived fully both Jackson's essential significance and his own remarkable kinship to Jackson. "We look back on his amazing personality," Roosevelt once said, "we review his battles because the struggles he went through, the victories he won are part and parcel of the struggles, the enmities, the defeats and the victories of those who have lived in all the generations that have followed."

II

The great paradox of democracy is that its moral ideas preceded its political and economic problems. Democracy drew its values and goals from the eighteenth century, its basic practical issues from the nineteenth century. Jefferson set forth the democratic dream in terms so compelling and universal that they have held broadly good for all subsequent generations. But his specific democratic presuppositions were derived from an agricultural society of small freeholds. His identification of democracy and rural life was so complete that he looked upon cities and upon a propertyless working class with a horror he did not conceal. "The mobs of great cities," he said, "add just so much to the support of pure government, as sores do to the strength of the human body."

Jefferson wrote, of course, before industrialism had begun to transform the basis of American life. As President he tried to grapple with some of the first repercussions of this transformation. But he died before any one could effectively measure the consequences of industrialism for democracy or restate the problems of democracy in terms of an industrial society. Jefferson's Virginia successors in the White House—Madison and Monroe—simply folded before the demands of the vigorous new business community; and John Quincy Adams, the sixth President, sympathized, on the whole, with these demands.

Jackson was thus the first President to take up the challenge to American democracy presented by a business community whose resources were greatly expanded by the Industrial Revolution. The business community had reached out for political power: involuntarily, perhaps, its objective became, not just to produce goods and make profits, but to control the state. Once in power it had crudely identified the broad interests of American society with the narrow cash interests of the businessmen. ("What is good for business," as the National Association of Manufacturers put it a century later, "is good for you.") The consequence was a series of measures which alarmed and threatened to impoverish the farmers, the workers, the professional people, the intellectuals and even the small businessmen.

The incompetence of business rule created a massive but inchoate movement of social protest. Jackson forged this protest into an effective political party, as he had forged the rag, tag and bobtail of the South into a fighting force at the battle of New Orleans. Businessmen inevitably denounced him for setting class against class. But in fact he was simply representing the groups in America outside the business community (and a good many enlightened businessmen as well) in a battle to preserve the foundations of American democracy.

His following included the farmers, mechanics and workers. It included the heads of the young and struggling trade union movement—in 1834 the Democrats sent Ely Moore, first president of the National Trades Union, to the House of Representatives where his fiery pro-labor speeches frightened the Southern Democrats and appalled John Quincy Adams. It included the efficient machines in the large Northern cities; it had its conservative Southern wing and its agricultural bloc. It included most of the leading writers of the day—Nathaniel Hawthorne, William Cullen Bryant, Walt Whitman, James Fenimore Cooper, Washington Irving, George Bancroft and many others. Anticipating the election to Congress of actress Helen Gahagan Douglas by a century, the Democrats of New York City even ran Edwin Forrest, the popular actor, for Congress in 1838.

Business aspirations came to focus under the leadership of Nicholas Biddle, president of the United States Bank. In 1832 Biddle determined on a campaign to secure the recharter of the Bank, both with its special access to the government and its special immunities from public control. A frenzy of lobbying, press hysteria and pressure group activity, stimulated along lines all too familiar to us today, pushed the Bank bill through both houses of Congress. Jackson sent it back with a resounding veto. "When the laws," wrote Jackson, "undertake . . . to make the rich richer and the potent more powerful, the humble members of society—the farmers, mechanics, and laborers—who have neither the times nor the means of securing like favors to themselves, have a right to complain of the injustice of their Government."

The issue then went to the country, which triumphantly sustained Jackson in the 1832 election. With this mandate behind him

Jackson removed the government deposits from the Bank. Against the nearly unanimous opposition of the business community, his successor, Martin Van Buren, established the independent treasury system, and thereby gave the deathblow to the theory that private banks had a proprietary right to the use of government funds.

III

This pattern has recurred periodically in our history. "Free enterprise," left alone, contains strong inherent tendencies toward monopoly—tendencies which no one has recognized with more acuteness than Adam Smith. Government has then to intervene in order to prevent competition from being extinguished. But the very act of intervention—particularly against the desire of the largest and most powerful elements of the business community—strengthens the authority of the government and increases the disposition of the people to look to the state for the solution of its problems.

Jackson's war against Biddle and the Bank transformed the central government from a mild and innocuous agency into an instrument with powers of coercion. He bared the teeth of the Constitution, and his victory established as a basic tenet of American democracy that in the last analysis the people's government has to be kept more powerful than any private group controlled by men not responsible to the people.

This meant, of course, that Jackson had to expand the executive powers in proportion to the vigor of Biddle's challenge. His Presidency almost transformed the character of the office, unfolding new Constitutional resources both for public and for party leadership. He used the veto, for example, more often than all his predecessors put together; and he first employed Federal patronage on a large scale as a means of maintaining his party organization.

Business denounced these acts as the prelude to dictatorship. At one point in his second term, after the removal of the government deposits from the Bank, the Senate actually passed a resolution charging the President with having violated the Constitution; and, when Jackson responded with a long protest, the Senate refused to enter it into its records. But Jackson was always confident in his appeal over the heads of Congress to the people. Before his second term ended, the Senate rescinded its resolution of censure.

Jackson's energy inevitably entangled him with the Supreme

Court. Eventually he was able to fill the Court with his own appointees who promptly handed down a series of decisions which threw the business community into panic. Daniel Webster wrote gloomily that the Court was "*gone* . . . and almost everything is gone, or seems rapidly going." But the nation managed even to survive the change in the personnel of the Court.

IV

Jackson thus laid out in firm lines the pattern for all the Presidents who have had to pick up the pieces after a period of business rule. The problem has always been with us. In one hundred and fifty years business has produced only one leader with a genuinely national viewpoint—Alexander Hamilton. Since the time of the Federalists, businessmen and their political servants have displayed no governing capacity in the realm of national politics. In the crises of American life the people have always turned to a coalition of non-business groups behind some militant democratic leader; the leader must tap all the resources of the Presidential power to fight for the democratic program against the Congress and the Supreme Court, which are both more likely to be under conservative control; and the record shows that the business community has always provided savage resistance to the policies which in the end have saved them.

Big government is thus not the result of a wild-eyed radical conspiracy. It is the direct creation of big business; for only through big government can the people impose their veto on the action of big business—the veto so indispensable to the workings of democratic society. As business itself has grown more complex, bureaucratic and centralized, so too has government machinery for controlling it.

Thus a difference of degree, rather than a difference in purpose, divides the age of Franklin Roosevelt from the age of Jackson. The New Deal did not invent government intervention in business, government appeals to a broad popular coalition against the business community, or the expansion of Presidential power. It simply stepped up these methods to meet the challenge of an ever more powerful and more centrally controlled business community.

Government intervention certainly presents thorny problems of its own. Roosevelt once said, "We have built up new instruments of public power. In the hands of a people's Government this power is wholesome and proper. But in the hands of political puppets of an economic autocracy such power would provide shackles for the liberties of the people." The example of totalitarianism in Germany and Russia is chastening. But let us not delude ourselves that all Federal regulation is Communist-inspired, that any proposal for government controls was born in Moscow. This is the type of myth which since the days of Jefferson and Jackson the business community has been fostering in order to protect itself from scrutiny and control.

Andrew Jackson may never have been quite the raw and romantic figure that some of his leftist admirers imagine. No one called him Andy. His table manners were good, and he could read and write. But his contributions to the development of American democracy have been fundamental just the same. He adapted Jeffersonianism to the harder, tougher necessities of industrial society. He showed future democratic Presidents how to restrain the business community when it tries to assert its political will to the detriment of the humble members of society. At a time when political power has swung back to the Right, liberals will find new inspiration in his fighting spirit.

RALPH WALDO EMERSON · *Napoleon; or, the Man of the World*

1 Among the eminent persons of the nineteenth century, Bonaparte is far the best known and the most powerful; and owes his predominance to the fidelity with which he expresses the tone of thought and belief, the aims of the masses of active and cultivated men. It is Swedenborg's theory that every organ is made up of homogeneous particles; or as it is sometimes expressed, every whole is made of similars; that is, the lungs are composed of infinitely small lungs; the liver, of infinitely small livers; the kidney, of little kidneys, etc. Following this analogy, if any man is found to

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—From *Representative Men*, 1850, Houghton Mifflin Company, successors to the original publishers, Ticknor, Reed, and Fields, authorized publishers.

carry with him the power and affections of vast numbers, if Napoleon is France, if Napoleon is Europe, it is because the people whom he sways are little Napoleons.

2 In our society there is a standing antagonism between the conservative and the democratic classes; between those who have made their fortunes, and the young and the poor who have fortunes to make; between the interests of dead labor,—that is, the labor of hands long ago still in the grave, which labor is now entombed in money stocks, or in land and buildings owned by idle capitalists,—and the interests of living labor, which seeks to possess itself of land and buildings and money stocks. The first class is timid, selfish, illiberal, hating innovation, and continually losing numbers by death. The second class is selfish also, encroaching, bold, self-relying, always outnumbering the other and recruiting its numbers every hour by births. It desires to keep open every avenue to the competition of all, and to multiply avenues: the class of business men in America, in England, in France and throughout Europe; the class of industry and skill. Napoleon is its representative. The instinct of active, brave, able men, throughout the middle class every where, has pointed out Napoleon as the incarnate Democrat. He had their virtues and their vices; above all, he had their spirit or aim. That tendency is material, pointing at a sensual success and employing the richest and most various means to that end; conversant with mechanical powers, highly intellectual, widely and accurately learned and skilful, but subordinating all intellectual and spiritual forces into means to a material success. To be the rich man, is the end. "God has granted," says the Koran, "to every people a prophet in its own tongue." Paris and London and New York, the spirit of commerce, of money and material power, were also to have their prophet; and Bonaparte was qualified and sent.

3 Every one of the million readers of anecdotes or memoirs or lives of Napoleon, delights in the page, because he studies in it his own history. Napoleon is thoroughly modern, and, at the highest point of his fortunes, has the very spirit of the newspapers. He is no saint,—to use his own word, "no capuchin," and he is no hero, in the high sense. The man in the street finds in him the qualities and powers of other men in the street. He finds him, like himself, by birth a citizen, who, by very intelligible merits, arrived at such a commanding position that he could indulge all those tastes

which the common man possesses but is obliged to conceal and deny: good society, good books, fast travelling, dress, dinners, servants without number, personal weight, the execution of his ideas, the standing in the attitude of a benefactor to all persons about him, the refined enjoyments of pictures, statues, music, palaces and conventional honors,—precisely what is agreeable to the heart of every man in the nineteenth century, this powerful man possessed.

4 It is true that a man of Napoleon's truth of adaptation to the mind of the masses around him, becomes not merely representative but actually a monopolizer and usurper of other minds. Thus Mirabeau plagiarized every good thought, every good word that was spoken in France. Dumont relates that he sat in the gallery of the Convention and heard Mirabeau make a speech. It struck Dumont that he could fit it with a peroration, which he wrote in pencil immediately, and showed it to Lord Elgin, who sat by him. Lord Elgin approved it, and Dumont, in the evening, showed it to Mirabeau. Mirabeau read it, pronounced it admirable, and declared he would incorporate it into his harangue to-morrow, to the Assembly. "It is impossible," said Dumont, "as, unfortunately, I have shown it to Lord Elgin." "If you have shown it to Lord Elgin and to fifty persons beside, I shall still speak it to-morrow:" and he did speak it, with much effect, at the next day's session. For Mirabeau, with his overpowering personality, felt that these things which his presence inspired were as much his own as if he had said them, and that his adoption of them gave them their weight. Much more absolute and centralizing was the successor to Mirabeau's popularity and to much more than his predominance in France. Indeed, a man of Napoleon's stamp almost ceases to have a private speech and opinion. He is so largely receptive, and is so placed, that he comes to be a bureau for all the intelligence, wit and power of the age and country. He gains the battle; he makes the code; he makes the system of weights and measures; he levels the Alps; he builds the road. All distinguished engineers, savans, statists, report to him: so likewise do all good heads in every kind: he adopts the best measures, sets his stamp on them, and not these alone, but on every happy and memorable expression. Every sentence spoken by Napoleon and every line of his writing, deserves reading, as it is the sense of France.

5 Bonaparte was the idol of common men because he had in transcendent degree the qualities and powers of common men. There is a certain satisfaction in coming down to the lowest ground of politics, for we get rid of cant and hypocrisy. Bonaparte wrought, in common with that great class he represented, for power and wealth,—but Bonaparte, specially, without any scruple as to the means. All the sentiments which embarrass men's pursuit of these objects, he set aside. The sentiments were for women and children. Fontanes, in 1804, expressed Napoleon's own sense, when in behalf of the Senate he addressed him,—"Sire, the desire of perfection is the worst disease that ever afflicted the human mind." The advocates of liberty and of progress are "ideologists;"—a word of contempt often in his mouth;—"Necker is an ideologist:" "Lafayette is an ideologist."

6 An Italian proverb, too well known, declares that "if you would succeed, you must not be too good." It is an advantage, within certain limits, to have renounced the dominion of the sentiments of piety, gratitude and generosity; since what was an impassable bar to us, and still is to others, becomes a convenient weapon for our purposes; just as the river which was a formidable barrier, winter transforms into the smoothest of roads.

7 Napoleon renounced, once for all, sentiments and affections, and would help himself with his hands and his head. With him is no miracle and no magic. He is a worker in brass, in iron, in wood, in earth, in roads, in buildings, in money and in troops, and a very consistent and wise master-workman. He is never weak and literary, but acts with the solidity and the precision of natural agents. He has not lost his native sense and sympathy with things. Men give way before such a man, as before natural events. To be sure there are men enough who are immersed in things, as farmers, smiths, sailors and mechanics generally; and we know how real and solid such men appear in the presence of scholars and grammarians: but these men ordinarily lack the power of arrangement, and are like hands without a head. But Bonaparte superadded to this mineral and animal force, insight and generalization, so that men saw in him combined the natural and the intellectual power, as if the sea and land had taken flesh and begun to cipher. Therefore the land and sea seem to presuppose him. He came unto his own and they received him. This ciphering operative knows what he is

working with and what is the product. He knew the properties of gold and iron, of wheels and ships, of troops and diplomatists, and required that each should do after its kind.

8 The art of war was the game in which he exerted his arithmetic. It consisted, according to him, in having always more forces than the enemy, on the point where the enemy is attacked, or where he attacks: and his whole talent is strained by endless manœuvre and evolution, to march always on the enemy at an angle, and destroy his forces in detail. It is obvious that a very small force, skilfully and rapidly manœuvring so as always to bring two men against one at the point of engagement, will be an overmatch for a much larger body of men.

9 The times, his constitution and his early circumstances combined to develop this pattern democrat. He had the virtues of his class and the conditions for their activity. That common-sense which no sooner respects any end than it finds the means to effect it; the delight in the use of means; in the choice, simplification and combining of means; the directness and thoroughness of his work; the prudence with which all was seen and the energy with which all was done, make him the natural organ and head of what I may almost call, from its extent, the *modern* party.

10 Nature must have far the greatest share in every success, and so in his. Such a man was wanted, and such a man was born; a man of stone and iron, capable of sitting on horseback sixteen or seventeen hours, of going many days together without rest or food except by snatches, and with the speed and spring of a tiger in action; a man not embarrassed by any scruples; compact, instant, selfish, prudent, and of a perception which did not suffer itself to be baulked or misled by any pretences of others, or any superstition or any heat or haste of his own. "My hand of iron," he said, "was not at the extremity of my arm, it was immediately connected with my head." He respected the power of nature and fortune, and ascribed to it his superiority, instead of valuing himself, like inferior men, on his opinionativeness, and waging war with nature. His favorite rhetoric lay in allusion to his star; and he pleased himself, as well as the people, when he styled himself the "Child of Destiny." "They charge me," he said, "with the commission of great crimes: men of my stamp do not commit crimes. Nothing has been more simple than my elevation, 'tis in vain to ascribe it to intrigue

or crime; it was owing to the peculiarity of the times and to my reputation of having fought well against the enemies of my country. I have always marched with the opinion of great masses and with events. Of what use then would crimes be to me?" Again he said, speaking of his son, "My son can not replace me; I could not replace myself. I am the creature of circumstances."

11 He had a directness of action never before combined with so much comprehension. He is a realist, terrific to all talkers and confused truth-obscuring persons. He sees where the matter hinges, throws himself on the precise point of ~~resistance, and~~ slights all other considerations. He is strong in the right manner, namely by insight. He never blundered into victory, but won his battles in his head before he won them on the field. His principal means are in himself. He asks counsel of no other. In 1796 he writes to the Directory: "I have conducted the campaign without consulting any one. I should have done no good if I had been under the necessity of conforming to the notions of another person. I have gained some advantages over superior forces and when totally destitute of every thing, because, in the persuasion that your confidence was reposed in me, my actions were as prompt as my thoughts."

12 History is full, ~~down to this day, of the imbecility of kings~~ and governors. They are a class of persons much to be pitied, for they know not what they should do. The weavers strike for bread, and the king and his ministers, knowing not what to do, meet them with bayonets. But Napoleon understood his business. Here was a man who in each moment and emergency knew what ~~to do~~ next. It is an immense comfort and refreshment to the spirits, not only of kings, but of citizens. Few men have any next; they live from hand to mouth, without plan, and are ever at the end of their line, and after each action wait for an impulse from abroad. Napoleon had been the first man of the world, if his ends had been purely public. As he is, he inspires confidence ~~and vigor~~ by the extraordinary unity of his action. He is firm, sure, self-denying, self-postponing, sacrificing every thing,—money, troops, generals, and his own safety also, to his aim; not misled, like common adventurers, by the splendor of his own means. "Incidents ought not to govern policy," he said, "but policy, incidents." "To be hurried away by every event is to have no political system at all." His victories were only so many doors,

and he never for a moment lost sight of his way onward, in the dazzle and uproar of the present circumstance. He knew what to do, and he flew to his mark. He would shorten a straight line to come at his object. Horrible anecdotes may no doubt be collected from his history, of the price at which he bought his successes; but he must not therefore be set down as cruel, but only as one who knew no impediment to his will; not bloodthirsty, not cruel,—but woe to what thing or person stood in his way! Not bloodthirsty, but not sparing of blood,—and pitiless. He saw only the object: the obstacle must give way. "Sire, General Clarke can not combine with General Junot, for the dreadful fire of the Austrian battery."—"Let him carry the battery."—"Sire, every regiment that approaches the heavy artillery is sacrificed: Sire, what orders?"—"Forward, forward!" Seruzier, a colonel of artillery, gives, in his "Military Memoirs," the following sketch of a scene after the battle of Austerlitz.—"At the moment in which the Russian army was making its retreat, painfully, but in good order, on the ice of the lake, the Emperor Napoleon came riding at full speed toward the artillery. 'You are losing time,' he cried; 'fire upon those masses; they must be engulfed: fire upon the ice!' The order remained unexecuted for ten minutes. In vain several officers and myself were placed on the slope of a hill to produce the effect: their balls and mine rolled upon the ice without breaking it up. Seeing that, I tried a simple method of elevating light howitzers. The almost perpendicular fall of the heavy projectiles produced the desired effect. My method was immediately followed by the adjoining batteries, and in less than no time we buried" some [1] "thousands of Russians and Austrians under the waters of the lake."

13 In the plenitude of his resources, every obstacle seemed to vanish. "There shall be no Alps," he said; and he built his perfect roads, climbing by graded galleries their steepest precipices, until Italy was as open to Paris as any town in France. He laid his bones to, and wrought for his crown. Having decided what was to be done, he did that with might and main. He put out all his strength. He risked everything and spared nothing, neither ammunition, nor money, nor troops, nor generals, nor himself.

14 We like to see every thing do its office after its kind, whether

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[1] As I quote at second hand, and cannot procure Seruzier, I dare not adopt the high figure I find. [Emerson's note.]

it be a milch-cow or a rattle-snake; and if fighting be the best mode of adjusting national differences, (as large majorities of men seem to agree,) certainly Bonaparte was right in making it thorough. The grand principle of war, he said, was that an army ought always to be ready, by day and by night and at all hours, to make all the resistance it is capable of making. He never economized his ammunition, but, on a hostile position, rained a torrent of iron,—shells, balls, grape-shot,—to annihilate all defence. On any point of resistance he concentrated squadron on squadron in overwhelming numbers until it was swept out of existence. To a regiment of horse-chasseurs at Lobenstein, two days before the battle of Jena, Napoleon said, "My lads, you must not fear death; when soldiers brave death, they drive him into the enemy's ranks." In the fury of assault, he no more spared himself. He went to the edge of his possibility. It is plain that in Italy he did what he could, and all that he could. He came, several times, within an inch of ruin; and his own person was all but lost. He was flung into the marsh at Arcola. The Austrians were between him and his troops, in the *mêlée,* and he was brought off with desperate efforts. At Lonato, and at other places, he was on the point of being taken prisoner. He fought sixty battles. He had never enough. Each victory was a new weapon. "My power would fall, were I not to support it by new achievements. Conquest has made me what I am, and conquest must maintain me." He felt, with every wise man, that as much life is needed for conservation as for creation. We are always in peril, always in a bad plight, just on the edge of destruction and only to be saved by invention and courage.

15 This vigor was guarded and tempered by the coldest prudence and punctuality. A thunderbolt in the attack, he was found invulnerable in his intrenchments. His very attack was never the inspiration of courage, but the result of calculation. His idea of the best defence consists in being still the attacking party. "My ambition," he says, "was great, but was of a cold nature." In one of his conversations with Las Cases, he remarked, "As to moral courage, I have rarely met with the two-o'clock-in-the-morning kind: I mean unprepared courage; that which is necessary on an unexpected occasion, and which, in spite of the most unforeseen events, leaves full freedom of judgment and decision:" and he did not hesitate to declare that he was himself eminently endowed with

this two-o'clock-in-the-morning courage, and that he had met with few persons equal to himself in this respect.

16 Every thing depended on the nicety of his combinations, and the stars were not more punctual than his arithmetic. His personal attention descended to the smallest particulars. "At Montebello, I ordered Kellermann to attack with eight hundred horse, and with these he separated the six thousand Hungarian grenadiers, before the very eyes of the Austrian cavalry. This cavalry was half a league off and required a quarter of an hour to arrive on the field of action, and I have observed that it is always these quarters of an hour that decide the fate of a battle." "Before he fought a battle, Bonaparte thought little about what he should do in case of success, but a great deal about what he should do in case of a reverse of fortune." The same prudence and good sense mark all his behavior. His instructions to his secretary at the Tuileries are worth remembering. "During the night, enter my chamber as seldom as possible. Do not awake me when you have any good news to communicate; with that there is no hurry. But when you bring bad news, rouse me instantly, for then there is not a moment to be lost." It was a whimsical economy of the same kind which dictated his practice, when general in Italy, in regard to his burdensome correspondence. He directed Bourrienne to leave all letters unopened for three weeks, and then observed with satisfaction how large a part of the correspondence had thus disposed of itself and no longer required an answer. His achievement of business was immense, and enlarges the known powers of man. There have been many working kings, from Ulysses to William of Orange, but none who accomplished a tithe of this man's performance.

17 To these gifts of nature, Napoleon added the advantage of having been born to a private and humble fortune. In his later days he had the weakness of wishing to add to his crowns and badges the prescription of aristocracy; but he knew his debt to his austere education, and made no secret of his contempt for the born kings, and for "the hereditary asses," as he coarsely styled the Bourbons. He said that "in their exile they had learned nothing, and forgot nothing." Bonaparte had passed through all the degrees of military service, but also was citizen before he was emperor, and so has the key to citizenship. His remarks and estimates discover the information and justness of measurement of the middle class.

Those who had to deal with him found that he was not to be imposed upon, but could cipher as well as another man. This appears in all parts of his Memoirs, dictated at St. Helena. When the expenses of the empress, of his household, of his palaces, had accumulated great debts, Napoleon examined the bills of the creditors himself, detected overcharges and errors, and reduced the claims by considerable sums.

18 His grand weapon, namely the millions whom he directed, he owed to the representative character which clothed him. He interests us as he stands for France and for Europe; and he exists as captain and king only as far as the Revolution, or the interest of the industrious masses, found an organ and a leader in him. In the social interests, he knew the meaning and value of labor, and threw himself naturally on that side. I like an incident mentioned by one of his biographers at St. Helena. "When walking with Mrs. Balcombe, some servants, carrying heavy boxes, passed by on the road, and Mrs. Balcombe desired them, in rather an angry tone, to keep back. Napoleon interfered, saying, 'Respect the burden, Madam.'" In the time of the empire he directed attention to the improvement and embellishment of the markets of the capital. "The market-place," he said, "is the Louvre of the common people." The principal works that have survived him are his magnificent roads. He filled the troops with his spirit, and a sort of freedom and companionship grew up between him and them, which the forms of his court never permitted between the officers and himself. They performed, under his eye, that which no others could do. The best document of his relation to his troops is the order of the day on the morning of the battle of Austerlitz, in which Napoleon promises the troops that he will keep his person out of reach of fire. This declaration, which is the reverse of that ordinarily made by generals and sovereigns on the eve of a battle, sufficiently explains the devotion of the army to their leader.

19 But though there is in particulars this identity between Napoleon and the mass of the people, his real strength lay in their conviction that he was their representative in his genius and aims, not only when he courted, but when he controlled, and even when he decimated them by his conscriptions. He knew, as well as any Jacobin in France, how to philosophize on liberty and equality; and when allusion was made to the precious blood of centuries, which

was spilled by the killing of the Duc d'Enghien, he suggested, "Neither is my blood ditchwater." The people felt that no longer the throne was occupied and the land sucked of its nourishment, by a small class of legitimates, secluded from all community with the children of the soil, and holding the ideas and superstitions of a long-forgotten state of society. Instead of that vampyre, a man of themselves held, in the Tuileries, knowledge and ideas like their own, opening of course to them and their children all places of power and trust. The day of sleepy, selfish policy, ever narrowing the means and opportunities of young men, was ended, and a day of expansion and demand was come. A market for all the powers and productions of man was opened; brilliant prizes glittered in the eyes of youth and talent. The old, iron-bound, feudal France was changed into a young Ohio or New York; and those who smarted under the immediate rigors of the new monarch, pardoned them as the necessary severities of the military system which had driven out the oppressor. And even when the majority of the people had begun to ask whether they had really gained any thing under the exhausting levies of men and money of the new master, the whole talent of the country, in every rank and kindred, took his part and defended him as its natural patron. In 1814, when advised to rely on the higher classes, Napoleon said to those around him, "Gentlemen, in the situation in which I stand, my only nobility is the rabble of the Faubourgs."

Napoleon met this natural expectation. The necessity of his position required a hospitality to every sort of talent, and its appointment to trusts; and his feeling went along with this policy. Like every superior person, he undoubtedly felt a desire for men and compeers, and a wish to measure his power with other masters, and an impatience of fools and underlings. In Italy, he sought for men and found none. "Good God!" he said, "how rare men are! There are eighteen millions in Italy, and I have with difficulty found two,—Dandolo and Melzi." In later years, with larger experience, his respect for mankind was not increased. In a moment of bitterness he said to one of his oldest friends, "Men deserve the contempt with which they inspire me. I have only to put some gold-lace on the coat of my virtuous republicans and they immediately become just what I wish them." This impatience at levity was, however, an oblique tribute of respect to those able persons who commanded his regard not only when he found them friends and coadjutors but also when they resisted his will. He could not confound Fox and Pitt, Carnot, Lafayette and Bernadotte, with the danglers of his court; and in spite of the detraction which his systematic egotism dictated toward the great captains who conquered with and for him, ample acknowledgments are made by him to Lannes, Duroc, Kleber, Dessaix, Massena, Murat, Ney and Augereau. If he felt himself their patron and the founder of their fortunes, as when he said "I made my generals out of mud,"— he could not hide his satisfaction in receiving from them a seconding and support commensurate with the grandeur of his enterprise. In the Russian campaign he was so much impressed by the courage and resources of Marshal Ney, that he said, "I have two hundred millions in my coffers, and I would give them all for Ney." The characters which he has drawn of several of his marshals are discriminating, and though they did not content the insatiable vanity of French officers, are no doubt substantially just. And in fact every species of merit was sought and advanced under his government. "I know," he said, "the depth and draught of water of every one of my generals." Natural power was sure to be well received at his court. Seventeen men in his time were raised from common soldiers to the rank of king, marshal, duke, or general; and the crosses of his Legion of Honor were given to personal valor, and not to family connexion. "When soldiers have been baptized in the fire of a battlefield, they have all one rank in my eyes."

21 When a natural king becomes a titular king, every body is pleased and satisfied. The Revolution entitled the strong populace of the Faubourg St. Antoine, and every horse-boy and powder-monkey in the army, to look on Napoleon as flesh of his flesh and the creature of *his* party: but there is something in the success of grand talent which enlists an universal sympathy. For in the prevalence of sense and spirit over stupidity and malversation, all reasonable men have an interest; and as intellectual beings we feel the air purified by the electric shock, when material force is overthrown by intellectual energies. As soon as we are removed out of the reach of local and accidental partialities, Man feels that Napoleon fights for him; these are honest victories; this strong steam-engine does our work. Whatever appeals to the imagination, by transcending the ordinary limits of human ability, wonderfully encourages

and liberates us. This capacious head, revolving and disposing sovereignly trains of affairs, and animating such multitudes of agents; this eye, which looked through Europe; this prompt invention; this inexhaustible resource:—what events! what romantic pictures! what strange situations!—when spying the Alps, by a sunset in the Sicilian sea; drawing up his army for battle in sight of the Pyramids, and saying to his troops, "From the tops of those pyramids, forty centuries look down on you;" fording the Red Sea; wading in the gulf of the Isthmus of Suez. On the shore of Ptolemais, gigantic projects agitated him. "Had Acre fallen, I should have changed the face of the world." His army, on the night of the battle of Austerlitz, which was the anniversary of his inauguration as Emperor, presented him with a bouquet of forty standards taken in the fight. Perhaps it is a little puerile, the pleasure he took in making these contrasts glaring; as when he pleased himself with making kings wait in his antechambers, at Tilsit, at Paris and at Erfurt.

22 We can not, in the ~~universal imbecility,~~ indecision and indolence of men, sufficiently congratulate ourselves ~~on this~~ strong and ready actor, who took occasion by the beard, and showed us how much may be accomplished by the mere force of such virtues as all men possess in less degrees; namely, by punctuality, by personal attention, by courage and thoroughness. "The Austrians," he said, "do not know the value of time." I should cite him, in his earlier years, as a model of prudence. His power does not consist in any wild or extravagant force; in any enthusiasm like Mahomet's, or singular power of persuasion; but in the exercise of common-sense on each emergency, instead of abiding by rules and customs. The lesson he teaches is that which vigor always teaches;—that there is always room for it. To what heaps of cowardly doubts is not that man's life an answer. When he appeared it was the belief of all military men that there could be nothing new in war; as it is the belief of men to-day that nothing new can be undertaken in politics, or in church, or in letters, or in trade, or in farming, or in our social manners and customs; and as it is at all times the belief of society that the world is used up. But Bonaparte knew better than society; and moreover knew that he knew better. I think all men know better than they do; know that the institutions we so volubly commend are go-carts and baubles; but they dare not trust

their presentiments. Bonaparte relied on his own sense, and did not care a bean for other people's. The world treated his novelties just as it treats everybody's novelties,—made infinite objection, mustered all the impediments; but he snapped his finger at their objections. "What creates great difficulty," he remarks, "in the profession of the land-commander, is the necessity of feeding so many men and animals. If he allows himself to be guided by the commissaries he will never stir, and all his expeditions will fail." An example of his common-sense is what he says of the passage of the Alps in winter, which all writers, one repeating after the other, had described as impracticable. "The winter," says Napoleon, "is not the most unfavorable season for the passage of lofty mountains. The snow is then firm, the weather settled, and there is nothing to fear from avalanches, the real and only danger to be apprehended in the Alps. On these high mountains there are often very fine days in December, of a dry cold, with extreme calmness in the air." Read his account, too, of the way in which battles are gained. "In all battles a moment occurs when the bravest troops, after having made the greatest efforts, feel inclined to run. That terror proceeds from a want of confidence in their own courage, and it only requires a slight opportunity, a pretence, to restore confidence to them. The art is, to give rise to the opportunity and to invent the pretence. At Arcola I won the battle with twenty-five horsemen. I seized that moment of lassitude, gave every man a trumpet, and gained the day with this handful. You see that two armies are two bodies which meet and endeavor to frighten each other; a moment of panic occurs, and that moment must be turned to advantage. When a man has been present in many actions, he distinguishes that moment without difficulty: it is as easy as casting up an addition."

28 This deputy of the nineteenth century added to his gifts a capacity for speculation on general topics. He delighted in running through the range of practical, of literary and of abstract questions. His opinion is always original and to the purpose. On the voyage to Egypt he liked, after dinner, to fix on three or four persons to support a proposition, and as many to oppose it. He gave a subject, and the discussions turned on questions of religion, the different kinds of government, and the art of war. One day he asked whether the planets were inhabited? On another, what was the age of the

world? Then he proposed to consider the probability of the destruction of the globe, either by water or by fire: at another time, the truth or fallacy of presentiments, and the interpretation of dreams. He was very fond of talking of religion. In 1806 he conversed with Fournier, bishop of Montpellier, on matters of theology. There were two points on which they could not agree, viz. that of hell and that of salvation out of the pale of the church. The Emperor told Josephine that he disputed like a devil on these two points, on which the bishop was inexorable. To the philosophers he readily yielded all that was proved against religion as the work of men and time, but he would not hear of materialism. One fine night, on deck, amid a clatter of materialism, Bonaparte pointed to the stars, and said, "You may talk as long as you please, gentlemen, but who made all that?" He delighted in the conversation of men of science, particularly of Monge and Berthollet; but the men of letters he slighted; they were "manufacturers of phrases." Of medicine too he was fond of talking, and with those of its practitioners whom he most esteemed,—with Corvisart at Paris, and with Antonomarchi at St. Helena. "Believe me," he said to the last, "we had better leave off all these remedies: life is a fortress which neither you nor I know any thing about. Why throw obstacles in the way of its defence? Its own means are superior to all the apparatus of your laboratories. Corvisart candidly agreed with me that all your filthy mixtures are good for nothing. Medicine is a collection of uncertain prescriptions, the results of which, taken collectively, are more fatal than useful to mankind. Water, air and cleanliness are the chief articles in my pharmacopœia."

24 His memoirs, dictated to Count Montholon and General Gourgaud at St. Helena, have great value, after all the deduction that it seems is to be made from them on account of his known disingenuousness. He has the good-nature of strength and conscious superiority. I admire his simple, clear narrative of his battles;—good as Cæsar's; his good-natured and sufficiently respectful account of Marshal Wurmser and his other antagonists; and his own equality as a writer to his varying subject. The most agreeable portion is the Campaign in Egypt.

25 He had hours of thought and wisdom. In intervals of leisure, either in the camp or the palace, Napoleon appears as a man of genius directing on abstract questions the native appetite for truth

and the impatience of words he was wont to show in war. He could enjoy every play of invention, a romance, a *bon mot*, as well as a stratagem in a campaign. He delighted to fascinate Josephine and her ladies, in a dim-lighted apartment, by the terrors of a fiction to which his voice and dramatic power lent every addition.

26 I call Napoleon the agent or attorney of the middle class of modern society; of the throng who fill the markets, shops, counting-houses, manufactories, ships, of the modern world, aiming to be rich. He was the agitator, the destroyer of prescription, the internal improver, the liberal, the radical, the inventor of means, the opener of doors and markets, the subverter of monopoly and abuse. Of course the rich and aristocratic did not like him. England, the centre of capital, and Rome and Austria, centres of tradition and genealogy, opposed him. The consternation of the dull and conservative classes, the terror of the foolish old men and old women of the Roman conclave, who in their despair took hold of any thing, and would cling to red-hot iron,—the vain attempts of statists to amuse and deceive him, of the emperor of Austria to bribe him; and the instinct of the young, ardent and active men every where, which pointed him out as the giant of the middle class, make his history bright and commanding. He had the virtues of the masses of his constituents: he had also their vices. I am sorry that the brilliant picture has its reverse. But that is the fatal quality which we discover in our pursuit of wealth, that it is treacherous, and is bought by the breaking or weakening of the sentiments; and it is inevitable that we should find the same fact in the history of this champion, who proposed to himself simply a brilliant career, without any stipulation or scruple concerning the means.

27 Bonaparte was singularly destitute of generous sentiments. The highest-placed individual in the most cultivated age and population of the world,—he has not the merit of common truth and honesty. He is unjust to his generals; egotistic and monopolizing; meanly stealing the credit of their great actions from Kellermann, from Bernadotte; intriguing to involve his faithful Junot in hopeless bankruptcy, in order to drive him to a distance from Paris, because the familiarity of his manners offends the new pride of his throne. He is a boundless liar. The official paper, his "Moniteur," and all his bulletins, are proverbs for saying what he wished to be

believed; and worse,—he sat, in his premature old age, in his lonely island, coldly falsifying facts and dates and characters, and giving to history a theatrical *éclat*. Like all Frenchmen he has a passion for stage effect. Every action that breathes of generosity is poisoned by this calculation. His star, his love of glory, his doctrine of the immortality of the soul, are all French. "I must dazzle and astonish. If I were to give the liberty of the press, my power could not last three days." To make a great noise is his favorite design. "A great reputation is a great noise: the more there is made, the farther off it is heard. Laws, institutions, monuments, nations, all fall; but the noise continues, and resounds in after ages." His doctrine of immortality is simply fame. His theory of influence is not flattering. "There are two levers for moving men,—interest and fear. Love is a silly infatuation, depend upon it. Friendship is but a name. I love nobody. I do not even love my brothers: perhaps Joseph a little, from habit, and because he is my elder; and Duroc, I love him too; but why?—because his character pleases me: he is stern and resolute, and I believe the fellow never shed a tear. For my part I know very well that I have no true friends. As long as I continue to be what I am, I may have as many pretended friends as I please. Leave sensibility to women; but men should be firm in heart and purpose, or they should have nothing to do with war and government." He was thoroughly unscrupulous. He would steal, slander, assassinate, drown and poison, as his interest dictated. He had no generosity, but mere vulgar hatred; he was intensely selfish; he was perfidious; he cheated at cards; he was a prodigious gossip, and opened letters, and delighted in his infamous police, and rubbed his hands with joy when he had intercepted some morsel of intelligence concerning the men and women about him, boasting that "he knew every thing;" and interfered with the cutting the dresses of the women; and listened after the hurrahs and the compliments of the street, incognito. His manners were coarse. He treated women with low familiarity. He had the habit of pulling their ears and pinching their cheeks when he was in good humor, and of pulling the ears and whiskers of men, and of striking and horse-play with them, to his last days. It does not appear that he listened at key-holes, or at least that he was caught at it. In short, when you have penetrated through all the circles of power and splendor, you were not dealing with a gentleman, at last; but with an impostor and a rogue; and he fully deserves the epithet of *Jupiter Scapin,* or a sort of Scamp Jupiter.

28 In describing the two parties into which modern society divides itself,—the democrat and the conservative,—I said, Bonaparte represents the democrat, or the party of men of business, against the stationary or conservative party. I omitted then to say, what is material to the statement, namely that these two parties differ only as young and old. The democrat is a young conservative; the conservative is an old democrat. The aristocrat is the democrat ripe and gone to seed;—because both parties stand on the one ground of the supreme value of property, which one endeavors to get, and the other to keep. Bonaparte may be said to represent the whole history of this party, its youth and its age; yes, and with poetic justice its fate, in his own. The counter-revolution, the counter-party, still waits for its organ and representative, in a lover and a man of truly public and universal aims.

29 Here was an experiment, under the most favorable conditions, of the powers of intellect without conscience. Never was such a leader so endowed and so weaponed; never leader found such aids and followers. And what was the result of this vast talent and power, of these immense armies, burned cities, squandered treasures, immolated millions of men, of this demoralized Europe? It came to no result. All passed away like the smoke of his artillery, and left no trace. He left France smaller, poorer, feebler, than he found it; and the whole contest for freedom was to be begun again. The attempt was in principle suicidal. France served him with life and limb and estate, as long as it could identify its interests with him; but when men saw that after victory was another war; after the destruction of armies, new conscriptions; and they who had toiled so desperately were never nearer to the reward,—they could not spend what they had earned, nor repose on their down-beds, nor strut in their châteaux,—they deserted him. Men found that his absorbing egotism was deadly to all other men. It resembled the torpedo, which inflicts a succession of shocks on any one who takes hold of it, producing spasms which contract the muscles of the hand, so that the man can not open his fingers; and the animal inflicts new and more violent shocks, until he paralyzes and kills his

victim. So this exorbitant egotist narrowed, impoverished and absorbed the power and existence of those who served him; and the universal cry of France and of Europe in 1814 was, "Enough of him;" "*Assez de Bonaparte.*"

30 It was not Bonaparte's fault. He did all that in him lay to live and thrive without moral principle. It was the nature of things, the eternal law of man and of the world which baulked and ruined him; and the result, in a million experiments, will be the same. Every experiment, by multitudes or by individuals, that has a sensual and selfish aim, will fail. The pacific Fourier will be as inefficient as the pernicious Napoleon. As long as our civilization is essentially one of property, of fences, of exclusiveness, it will be mocked by delusions. (Our riches will leave us sick; there will be bitterness in our laughter, and our wine will burn our mouth. Only that good profits which we can taste with all doors open, and which serves all men.)

Discussion

1. What is the thesis or main idea of this essay?
2. Give a detailed explanation of what Emerson meant by "the democratic classes." Does Emerson seem to be attacking the ideal of democracy? Explain.
3. In what ways was Napoleon representative of the business class—"the class of industry and skill"? Why did the social and political position of this group in Europe make it especially interested in a leader like Napoleon?
4. Point out the traits and abilities Emerson gives Napoleon credit for. Pick out specific incidents and acts used to show what Napoleon was like. Are there enough of these?
5. How does Emerson explain the paradox of Napoleon's being the greatest democrat and at the same time the greatest dictator?
6. At least four-fifths of this essay is in praise of Napoleon; only one-fifth in dispraise. Does this mean that the essay is much more favorable than unfavorable to the emperor? If not, is the essay badly proportioned?
7. Is this an especially "timely" essay? That is; does it seem to apply to the past twenty years or so? Explain.
8. What is the meaning of each of the following words as it is used in the essay? Study the context before consulting a dictionary. The numbers indicate the paragraphs.

encroaching, material, sensual (2); *presence, centralizing, sense* (4); *sentiments* (5); *dominion* (6); *literary, agents, native, arrangement* (7); *pattern* (9); *compact, instant* (10); *abroad, public, self-postponing* (12); *prescription, discover* (17); *interests* (18); *immediate, patron* (19); *confound, characters, power* (20); *universal, liberates, animating, agitated* (21); *genealogy* (26).

Writing

Write a carefully considered 200–300 word summary of this essay.

WILLIAM G. CARLETON · *What Lincoln Means Today*

It is now over three quarters of a century since Abraham Lincoln's tragic death, but his fame continues to grow. No figure in American history comes within miles of being as much written about. Every year an ever-widening stream of Lincoln biographies, anecdotes, and folklore pours from the presses. Every year both the authentic Lincoln histories and the mythological Lincoln cult increase and proliferate. As the United States becomes increasingly important in world affairs, we may expect Lincoln to become more and more familiar to the masses of people the world over.

Lincoln's enduring fame rests upon a number of things. His dramatic personal rise from obscure poverty to high place. His shrewd conduct of the presidency during the greatest crisis in American history. His cautious welding together of all the diverse elements in the North to insure the victory. His steady keeping in mind of ultimate goals. His tolerance, balance, sure judgment, good sense, earthy humor, homespun wisdom. The classic clarity of his state papers. The dramatic manner of his death in the very hour of the nation's triumph. And most important of all, the amazing way

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—From *Vital Speeches of the Day*, March 1, 1948. Reprinted by permission of William G. Carleton and *Vital Speeches of The Day*.

the dominant social and political forces of succeeding decades have come together to use Lincoln as a symbol.

No historical character ever wins the conflict with oblivion merely because of his actual achievements. Subsequent history and the trends and forces that prevail after his death have as much or even more to do with that. And this is especially true of Lincoln. Lincoln has become the gigantic figure he is as much for the movements he represents as for the high achievements of his public life.

For Lincoln has become a symbol. And he has become a symbol not of one mighty force but of many. More, he has become a symbol of forces that usually do not harmonize. He has become a symbol of Union and nationalism, of triumphant industrialism, of liberal agrarianism, of humanitarianism and labor emancipation, and of democracy. No other ranking historical figure of the nineteenth century combines in himself so many forces, so many contradictory forces, as Lincoln.

In the history of the nineteenth century, Bismarck preeminently stands for nationalism, Gladstone for the successful policies of the bourgeoisie, Marx for the rise of labor, and Jefferson for democracy. Jefferson and Gladstone and Marx are disliked by the nationalists. Jefferson and Marx are disliked by the industrial bourgeoisie. Bismarck (in spite of his early social security measures) and Gladstone are disliked by the Socialists. Bismarck and Marx are disliked by the democrats. But Lincoln is a hero to all of them—to the bourgeoisie, to the nationalists, to the socialists, to the democrats!

When American patriots gather to celebrate Lincoln's birthday, they think of him primarily as the protagonist of nationalism and the savior of the Union. When members of the Republican party gather in Lincoln-day dinners to honor their first president, they think of him primarily as the defender of the business policies of Hamilton, Webster, and Clay. When farmers on the prairies gather to commemorate Lincoln, they think of him primarily as the friend of the Homestead Act and the developer of the West. When Negroes gather to memorialize the great Emancipator, they think of him primarily as a humanitarian. When Southerners gather to pay tribute to Lincoln, they think of him as a kindly and tolerant man who might have saved them from the extremities of radical Reconstruction. When wage-earners gather in their unions to pay homage to Lincoln, they think of him as one who was instrumental in ending a system wherein free labor was compelled to compete with slave labor. And when democrats gather anywhere in the world, they praise Lincoln as an example of one who led a revolution and waged a mighty war while still preserving the essentials of the democratic process.

Hence Karl Marx (writing in Greeley's *Tribune*) and Mark Hanna, Booker T. Washington and Henry W. Grady, Henry George and Leland Stanford, Ignatius Donnelly and Andrew Carnegie, Robert M. LaFollette and Chauncey Depew, Eugene V. Debs and Calvin Coolidge, Sidney Hillman and Joseph N. Pew, Franklin D. Roosevelt and Robert R. McCormick—all these men of conflicting faiths—have found in Lincoln a source of ideological inspiration.

The linking of these forces and movements around the name of a single individual is indeed unique, but Lincoln's actual story is itself an amazing one. For Lincoln, a Clay Whig, a life-long defender of banks, internal improvements, and tariffs, helped pave the way for the triumph of industrialism by quoting Jefferson against the slave power, by appealing to Jefferson's Declaration of Independence, and by attacking the Dred Scott decision in the name of the old Jeffersonian suspicion of courts and judicial review. And in bringing the industrialists to power Lincoln waged a titanic war in an essentially democratic way—a war which saved the Union, increased centralization, intensified nationalism, freed the slaves, emancipated poor whites and laborers from having to compete with slave labor, and opened the West to free land and free institutions.

Today Lincoln has added meaning for us, and that added meaning springs not from the symbolic Lincoln but from the real Lincoln. We can learn from Lincoln, the master politician, how to make democracy work in difficult times.

For Lincoln is the greatest politician we have ever produced. and democracy cannot function without effective politicians. The process of group conflict and compromise is the very essence of politics, and the master politician is one who can mediate between conflicting groups, find the greatest common denominator for the largest number of clashing forces, and compromise group interests for the general good. Our presidents who have been able to do this have had administrations of great constructive achievement. Our presidents who have not been able to do this have accomplished little. Lincoln, in the most trying times of our history, was able to accomplish this with marked success.

When Lincoln assumed the presidency and was forced to wage a war to preserve the Union, he faced a bitterly divided North. There was the task of finding a common ground on which to fight the war. There was the task of getting and keeping sufficient support from the border states and from the millions in the North who had voted against Lincoln, many of whom held the Republicans responsible for the war, to make victory possible. There was the task of welding War Democrats, border-state moderates, mild Republicans, middle-of-the-road Republicans, and abolitionist Republicans into a unified party capable of responsible government and capable of conducting a successful war. There was the task of harmonizing such demanding and widely separated men as the Blairs, Horace Greeley, Salmon P. Chase, John C. Fremont, and Ben Butler. Lincoln, with consummate tact and shrewd skill, built from this crisscross of antagonisms and divided opinion a program, a party, and a public opinion capable of waging and winning the war. To believe that Fremont could have done this is to believe in miracles. Whether Seward or Chase could have done this is doubtful. The supreme and undeniable fact is that Lincoln did this.

All of Lincoln's previous political life had been a preparation for this superlative achievement. Out in Illinois he had maneuvered successfully between German voters and Know-Nothings, between old Whigs and new Republicans, and between the varying shades of opinion on the Negro question within the Republican party. This was what had made him more "available" than Seward at the Republican nominating convention of 1860. This was what had irritated Stephen A. Douglas, who often had twitted Lincoln on being black in northern Illinois, mulatto in central Illinois, and lily white in southern Illinois. And this is what offended the late Albert J. Beveridge when Beveridge, in the 1920's, came to write of Lincoln's career in Illinois politics. For the quality of cautious compromise and group mediation which may appear wise statesmanship on the national stage may appear petty time-serving when applied to local politics. Beveridge himself had been catapulted into the United States Senate from Indiana without serving the usual apprenticeship in local politics. Besides, Beveridge had a way of taking extreme, though not consistent, positions on public questions and of casting his own speeches in terms of sharp antithesis. To a man of such background and temperament, Lincoln in his Illinois years appeared over-careful and timorous. But had Beveridge lived to complete his great biography, no doubt he would have traced Lincoln's "growth," and the methods which had appeared picayune when used in Illinois would have appeared heroic when displayed on the national stage at the time of our greatest national trial.

Lincoln, of course, was no opportunist. Certainly during the national phase of his career he never confused means and ends. His resiliency did not indicate a surrender of values. He knew well his general direction. He kept constantly in mind large, ultimate goals.

And so Lincoln's way of making democracy work in time of crises has much to teach us today. In our generation, the process of group conflict and compromise has been widened and accelerated. The drive of an industrial society is toward more numerous, more varied, and better organized groups. The great challenge to democratic leadership today is how to mediate between them, how to compromise their conflicting interests, how to find the ever-shifting common denominator that will bring them together. In this high art of adjusting group differences, we can learn much from the middle-of-the-road spirit and method of Lincoln.

Even more important, at the present moment the United States is called upon to give leadership to a world turbulent and troubled in revolutionary change. To steer a course somewhere between the warring ideologies, between extreme collectivism and doctrinaire capitalism, between communist revolution and fascist reaction, between a dictatorship of the left and a dictatorship of the right, will not be easy. It will be necessary to summon all the tact, patience, and political skill learned in mediating between our conflicting groups at home—learned in our school of political freedom—to help compose in a peaceful and in a democratic way the embattled groups and clashing ideologies of our time. Mere opportunists cannot do this. Nor can cock-sure men or dogmatic men or extreme men do this. But the men who have learned something from the flexibility, the tolerance, and the wisdom of Lincoln—these men may.

JOHN FISCHER · *Unwritten Rules of American Politics*

The basic argument for a third party always remains the same. It is a persuasive argument, especially for well-meaning people who have not had much first-hand experience in politics. It runs something like this:

"Both of the traditional American parties are outrageous frauds. Neither the Republicans nor the Democrats have any fundamental principles or ideology. They do not even have a program. In every campaign the platforms of both parties are simply collections of noble generalities, muffled in the vaguest possible language; and in each case the two platforms are very nearly identical.

"Obviously, then, both parties are merely machines for grabbing power and distributing favors. In their lust for office they are quite willing to make a deal with anybody who can deliver a sizable block of votes. As a result, each party has become an outlandish cluster of local machines and special interest groups which have nothing in common except a lecherous craving for the public trough.

"This kind of political system"—so the argument runs—"is clearly meaningless. A man of high principles can never hope to accomplish anything through the old parties, because they are not interested in principle. Moreover, the whole arrangement is so illogical that it affronts every intelligent citizen. Consequently, it is the duty of every liberal to work for a tidier and more sensible political system.

"We ought to separate the sheep from the goats—to herd all the progressives on one side of the fence and all the conservatives on the other. Then politics really will have some meaning; we will know who the enemy is and where he stands; every campaign can be fought over clearly-defined issues. The Europeans, who are

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—From *Harper's Magazine*, November, 1948, reprinted by permission of *Harper's Magazine* and John Fischer.

more sophisticated politically than we simple Americans, discovered this long ago, and in each of their countries they have arranged a neat political spectrum running from Left to Right.

"As a first step toward such a logical scheme of politics, we need to organize a progressive party with a precise ideology and a clearly formulated program." (Nowadays the implication usually is that such a program must be more or less Marxist, whether in the Communist or Social Democratic tradition.) "Such a party will rally together the labor movement, the farmers, and the white-collar liberals—and then it should have little trouble in defeating the reactionary business men who have long held such strategic positions in our old-fashioned political system." . . .

It sounds so plausible—at least on the surface—that it is hard to see why the idea has never made much headway. Indeed, many veteran third party enthusiasts have been able to account for their failure only by assuming a perverse and rock-headed stupidity among the American electorate. This, in turn, sometimes leads to a secret conviction that the dopes don't know what is good for them—and that what this country needs is a Strong Leader or a small, tough party of the enlightened, which can herd the ignorant masses up the road to Utopia whether they like it or not.

There is, however, one other possible explanation for the chronic failure of the third-party argument: maybe there is something wrong with the idea itself. Maybe it never gets to first base, not because the American voter is a hopeless dullard, but simply because he rejects instinctively a notion which doesn't make sense in terms of his own experience.

It can be argued, indeed, that a third party movement usually is an attempt to transplant a European concept of politics into an American setting—and that it fails because our own political tradition is more vigorous, more deeply rooted, and far better suited to our own peculiar needs. Such attempts often serve a useful purpose, as we shall see; but it is not the purpose which the evangels of the new party have in mind. Their whole endeavor, in fact, springs out of a profound misunderstanding of the way in which the American political system works.

Moreover, it seems to me that a careful look will show that our native scheme of politics is a more complex and subtle conception than the crude blacks and whites of the European ideological parties. And finally there is considerable evidence that our own system—in spite of certain dangerous weaknesses—has on the whole worked out more successfully than the European.

II

Perhaps it is the very subtlety of the American political tradition which is responsible for the almost universal misunderstanding of it abroad. Every practicing American politician grasps its principles by instinct; if he does not, he soon retires into some less demanding profession. Moreover, the overwhelming majority of citizens have a sound working knowledge of the system, which they apply every day of their lives—though many of them might have a hard time putting that knowledge into words. There are almost no foreigners, however (except perhaps D. W. Brogan), who really understand the underlying theory. Even the editors of the London *Economist*—probably the most brilliant and well-informed group of journalists practicing anywhere today—display their bewilderment week after week. To them, and to virtually all other European observers, our whole political scene looks arbitrary, irrational, and dangerous.

Another reason for this misunderstanding lies in the fact that surprisingly little has been written about the rules of American politics during our generation. The newspapers, textbooks, and learned journals are running over with discussions of tactics and mechanics—but no one, so far as I know, has bothered to trace out the basic tradition for a good many years.

In fact, the most useful discussion of this tradition which I have come across is the work of John C. Calhoun, published nearly a century ago. Today of course he is an almost forgotten figure, and many people take it for granted that his views were discredited for good by the Civil War. I know of only one writer—Peter F. Drucker of Bennington College—who has paid much attention to him in recent years. It was he who described Calhoun's ideas as "a major if not the only key to the understanding of what is specifically and uniquely American in our political system"; and I am indebted to Dr. Drucker for much of the case set forth here.

Calhoun summed up his political thought in what he called the Doctrine of the Concurrent Majority. He saw the United States as a nation of tremendous and frightening diversity—a collection of many different climates, races, cultures, religions, and economic patterns. He saw the constant tension among all these special interests, and he realized that the central problem of American politics was to find some way of holding these conflicting groups together.

It could not be done by force; no one group was strong enough to impose its will on all the others. The goal could be achieved only by compromise—and no real compromise could be possible if any threat of coercion lurked behind the door. Therefore, Calhoun reasoned, every vital decision in American life would have to be adopted by a "concurrent majority"—by which he meant, in effect, a unanimous agreement of all interested parties. No decision which affected the interests of the slaveholders, he argued, should be taken without their consent; and by implication he would have given a similar veto to every other special interest, whether it be labor, management, the Catholic church, old-age pensioners, the silver miners, or the corn-growers of the Middle West.

Under the goad of the slavery issue, Calhoun was driven to state his doctrine in an extreme and unworkable form. If every sectional interest had been given the explicit legal veto power which he called for, the government obviously would have been paralyzed. . . . It is the very essence of the idea of "concurrent majority" that it cannot be made legal and official. It can operate effectively only as an informal, highly elastic, and generally accepted understanding. Perhaps the best example is the Quaker church meeting, where decisions are not reached by formal vote at all, but rather by a give-and-take discussion which continues until "the sense of the meeting" jells and is accepted by everybody present.

Moreover, government by concurrent majority can exist only when no one power is strong enough to dominate completely, *and then only when all of the contending interest groups recognize and abide by certain rules of the game.*

These rules are the fundamental bond of unity in American political life. They can be summed up as a habit of extraordinary toleration, plus "equality" in the peculiar American meaning of that term which cannot be translated into any other language, even into the English of Great Britain. Under these rules every group tacitly binds itself to tolerate the interests and opinions of every other group. It must not try to impose its views on others, nor can it press its own special interests to the point where they seriously endanger the interests of other groups or of the nation as a whole.

Furthermore, each group must exercise its implied veto with responsibility and discretion; and in times of great emergency it must forsake its veto right altogether. It dare not be intransigent or doctrinaire. It must make every conceivable effort to compromise, relying on its veto only as a last resort. For if any player wields this weapon recklessly, the game will break up—or all the other players will turn on him in anger, suspend the rules for the time being, and maul those very interests he is trying so desperately hard to protect. That was what happened in 1860, when the followers of Calhoun carried his doctrine to an unbearable extreme. Much the same thing, on a less violent scale, happened to American business interests in 1933 and to the labor unions in 1947.

This is the somewhat elusive sense, it seems to me, in which Calhoun's theory has been adopted by the American people. But elusive and subtle as it may be, it remains the basic rule of the game of politics in this country—and in this country alone. Nothing comparable exists in any other nation, although the British, in a different way, have applied their own rules of responsibility and self-restraint.

It is a rule which operates unofficially and entirely outside the Constitution—but it has given us a method by which all the official and Constitutional organs of government can be made to work. It also provides a means of selecting leaders on all levels of our political life, for hammering out policies, and for organizing and managing the conquest of political power.

III

The way in which this tradition works in practice can be observed most easily in Congress. Anyone who has ever tried to push through a piece of legislation quickly discovers that the basic units of organization on Capitol Hill are not the parties, but the so-called blocs, which are familiar to everyone who reads a newspaper. There are dozens of them—the farm bloc, the silver bloc, the friends of labor, the business group, the Midwestern isolationists, the public power bloc—and they all cut across party lines.

They are loosely organized and pretty blurred at the edges, so that every Congressman belongs at different times to several different blocs. Each of them represents a special interest group. Each of them ordinarily works hand-in-hand with that group's Washington lobby. In passing, it might be noted that these lobbies are by no means the cancerous growth which is sometimes pictured in civics textbooks. They have become an indispensable part of the political machine—the accepted channel through which American citizens make their wishes known and play their day-to-day role in the process of government. Nor is their influence measured solely by the size of the bankrolls and propaganda apparatus which they have at their disposal. Some of the smallest and poorest lobbies are often more effective than their well-heeled rivals. For example, Russell Smith, the one-man lobby of the Farmers Union, was largely responsible for conceiving and nursing through Congress the Employment Act of 1946, one of the most far-reaching measures adopted since the war.

Now it is an unwritten but firm rule of Congress that no important bloc shall ever be voted down—under normal circumstances—on any matter which touches its own vital interests. Each of them, in other words, has a tacit right of veto on legislation in which it is primarily concerned. The ultimate expression of this right is the institution—uniquely American—of the filibuster in the Senate. Recently it has acquired a bad name among liberals because the Southern conservatives have used it ruthlessly to fight off civil rights legislation and protect white supremacy. Not so long ago, however, the filibuster was the stoutest weapon of such men as Norris and the LaFollettes in defending many a progressive cause. . . .

Naturally no bloc wants to exercise its veto power except when it is absolutely forced to—for this is a negative power, and one which is always subject to retaliation. Positive power to influence legislation, on the other hand, can be gained only by conciliation, compromise, and endless horse-trading.

The farm bloc, for instance, normally needs no outside aid to halt the passage of a hostile bill. As a last resort, three or four strong-lunged statesmen from the corn belt can always filibuster it to death in the Senate. If the bloc wants to put through a measure to support agricultural prices, however, it can succeed only by enlisting the help of other powerful special interest groups. Consequently, it must always be careful not to antagonize any potential ally by a reckless use of the veto; and it must be willing to pay for such help by throwing its support from time to time behind legislation sought by the labor bloc, the National Association of Manufacturers, or the school-teachers' lobby.

The classic alliance of this sort was formed in the early days of the New Deal, when most of the Roosevelt legislation was shoved onto the statute books by a temporary coalition of the farm bloc and urban labor, occasionally reinforced by such minor allies as the public power group and spokesmen for the northern Negroes. Mr. Roosevelt's political genius rested largely on his ability to put together a program which would offer something to each of these groups without fatally antagonizing any of them, and then to time the presentation of each bill so that he would always retain enough bargaining power to line up a Congressional majority. It was also necessary for him to avoid the veto of the business group, which viewed much of this legislation as a barbarous assault upon its privileges; and for this purpose he employed another traditional technique, which we shall examine a little later.

This process of trading blocs of votes is generally known as log-rolling, and frequently it is deplored by the more innocent type of reformer. Such pious disapproval has no effect whatever on any practicing politician. He knows that log-rolling is a sensible and reasonably fair device, and that without it Congress could scarcely operate at all.

In fact, Congress gradually has developed a formal apparatus—the committee system—which is designed to make the log-rolling process as smooth and efficient as possible. There is no parallel system anywhere; the committees of Parliament and of the Continental legislative bodies work in an entirely different way.

Obviously the main business of Congress—the hammering out of a series of compromises between many special interest groups—cannot be conducted satisfactorily on the floor of the House or Senate. The meetings there are too large and far too public for such delicate negotiations. Moreover, every speech delivered on the floor must be aimed primarily at the voters back home, and not at the other members in the chamber. Therefore, Congress—especially the House—does nearly all its work in the closed sessions of its various committees, simply because the committee room is the only place where it is possible to arrange a compromise acceptable to all major interests affected.

For this reason, it is a matter of considerable importance to get a bill before the proper committee. Each committee serves as a forum for a particular cluster of special interests, and the assignment of a bill to a specific committee often decides which interest shall be recognized officially as affected by the measure and therefore entitled to a hand in its drafting. "Who is to have standing before the committee" is the technical term, and it is this decision that frequently decides the fate of the legislation.

IV

Calhoun's principles of the concurrent majority and of sectional compromise operate just as powerfully, though sometimes less obviously, in every other American political institution. Our cabinet, for example, is the only one in the world where members are charged by law with the representation of special interests—labor, agriculture, commerce, and so on. In other countries, each agency of government is at least presumed to act for the nation as a whole; here most agencies are expected to behave as servants for one interest or another. The Veterans' Administration, to cite the most familiar case, is frankly intended to look out for Our Boys; the Maritime Commission is the spokesman for the shipping industry; the National Labor Relations Board, as originally established under the Wagner Act, was explicitly intended to build up the bargaining power of the unions.

Even within a single department, separate agencies are sometimes set up to represent conflicting interests. Thus in the Department of Agriculture under the New Deal the old Triple-A became primarily an instrument of the large-scale commercial farmers, as represented by their lobby, the Farm Bureau Federation; while the Farm Security Administration went to bat for the tenants, the farm laborers, and the little subsistence farmers, as represented by the Farmers Union.

This is one reason why federal agencies often struggle so bitterly against each other, and why the position of the administration as a whole on any question can be determined only after a long period of inter-bureau squabbling and compromise. Anyone who was in Washington during the war will remember how these goings-on always confused and alarmed our British allies.

Calhoun's laws also govern the selection of virtually every candidate for public office. The mystery of "eligibility" which has eluded most foreign observers simply means that a candidate must not be unacceptable to any important special interest group—a negative rather than a positive qualification. A case of this process at work was the selection of Mr. Truman as the Democrat's Vice Presidential candidate in 1944. As Edward J. Flynn, the Boss of the Bronx, has pointed out in his memoirs, Truman was the one man "who would hurt . . . least" as Roosevelt's running mate. Many stronger men were disqualified, Flynn explained, by the tacit veto of one sectional interest or another. Wallace was unacceptable to the business men and to many local party machines. Byrnes was distasteful to the Catholics, the Negroes, and organized labor. Rayburn came from the wrong part of the country. Truman, however, came from a border state, his labor record was good, he had not antagonized the conservatives, and—as Flynn put it—"he had never made any 'racial' remarks. He just dropped into the slot."

The same kind of considerations govern the selection of candidates right down to the county, city, and precinct levels. Flynn, one of the most successful political operators of our time, explained in some detail the complicated job of making up a ticket in his own domain. Each of the main population groups in the Bronx—Italians, Jews, and Irish Catholics—must be properly represented on the list of nominees, and so must each of the main geographical divisions. The result is a ticket which sounds like the roster of the Brooklyn Dodgers: Loreto, Delagi, Lyman, Joseph, Lyons, and Foley.

Comparable traditions govern the internal political life of the American Legion, the Federation of Women's Clubs, university student bodies, labor unions, Rotary Clubs, and the thousands of other quasi-political institutions which are so characteristic of our society and which give us such a rich fabric of spontaneous local government.

The stronghold of Calhoun's doctrine, however, is the American party—the wonder and despair of foreigners who cannot fit it into any of their concepts of political life.

The purpose of European parties is, of course, to divide men of different ideologies into coherent and disciplined organizations. The historic role of the American party, on the other hand, is not to divide but to unite. That task was imposed by simple necessity. If a division into ideological parties had been attempted, in addition to all the other centrifugal forces in this country, it very probably would have proved impossible to hold the nation together. The Founding Fathers understood this thoroughly; hence Washington's warning against "factions."

Indeed, on the one occasion when we did develop two ideological parties, squarely opposing each other on an issue of principle, the result was civil war. Fortunately, that was our last large-scale experiment with a third party formed on an ideological basis—for in its early days that is just what the Republican party was.

Its radical wing, led by such men as Thaddeus Stevens, Seward, and Chase, made a determined and skillful effort to substitute principles for interests as the foundations of American political life. Even within their own party, however, they were opposed by such practical politicians as Lincoln and Johnson—men who distrusted fanaticism in any form—and by the end of the Reconstruction period the experiment had been abandoned. American politics then swung back into its normal path and has never veered far away from it since. Although Calhoun's cause was defeated, his political theory came through the Civil War stronger than ever.

The result is that the American party has no permanent program and no fixed aim, except to win elections. Its one purpose is to unite the largest possible number of divergent interest groups in the pursuit of power. Its unity is one of compromise, not of dogma. It must—if it hopes to succeed—appeal to considerable numbers on both the left and the right, to rich and to poor, Protestant and Catholic, farmer and industrial worker, native and foreign born.

It must be ready to bid for the support of any group that can deliver a sizable chunk of votes, accepting that group's program with whatever modifications may be necessary to reconcile the other members of the party. If sun worship, or Existentialism, or the nationalization of industry should ever attract any significant following in this country, you can be sure that both parties would soon whip up a plank designed to win it over.

This ability to absorb new ideas (along with the enthusiasts behind them) and to mold them into a shape acceptable to the party's standpatters is, perhaps, the chief measure of vitality in the party's leadership. Such ideas almost never germinate within the party itself. They are stolen—very often from third parties.

Indeed, the historic function of third parties has been to sprout new issues, nurse them along until they have gathered a body of supporters worth stealing, and then to turn them over (often reluctantly) to the major parties. A glance at the old platforms of the Populists, the Bull Moosers, and the Socialists will show what an astonishingly high percentage of their once-radical notions have been purloined by both Republicans and Democrats —and enacted into law. Thus the income tax, child-labor laws, minimum wages, regulation of railroads and utilities, and old-age pensions have all become a part of the American Way of Life. . . .

While each major party must always stand alert to grab a promising new issue, it also must be careful never to scare off any of the big, established interest groups. For as soon as it alienates any one of them, it finds itself in a state of crisis.

For sixteen years the Republicans lost much of their standing as a truly national party because they had made themselves unacceptable to labor. Similarly, the Democrats during the middle stage of the New Deal incurred the wrath of the business interests. Ever since Mr. Truman was plumped into the White House, the Democratic leadership has struggled desperately—though rather ineptly—to regain the confidence of business men without at the same time driving organized labor out of the ranks. It probably would be safe to predict that if the Republican party is to regain a long period of health, it must . . . make an equally vigorous effort to win back the confidence of labor. For the permanent veto of any major element in American society means political death—as the ghosts of the Federalists and Whigs can testify.

V

The weaknesses of the American political system are obvious—much more obvious, in fact, than its virtues. These weaknesses have been so sharply criticized for the past hundred years, by a procession of able analysts ranging from Walter Bagehot to Thomas K. Finletter, that it is hardly necessary to mention them here. It is enough to note that most of the criticism has been aimed at two major flaws.

First, it is apparent that the doctrine of the concurrent majority is a negative one—a principle of inaction. A strong government, capable of rapid and decisive action, is difficult to achieve under a system which forbids it to do anything until virtually everybody acquiesces. In times of crisis, a dangerously long period of debate and compromise usually is necessary before any administration can carry out the drastic measures needed. The depression of the early thirties, the crisis in foreign policy which ended only with Pearl Harbor, the equally great crisis of the Marshall program a few months ago all illustrate this recurring problem.

This same characteristic of our system gives undue weight to the small but well-organized pressure group—especially when it is fighting *against* something. Hence a few power companies were able to block for twenty years the sensible use of the Muscle Shoals dam which eventually became the nucleus of TVA, and—in alliance with the railroads, rail unions, and Eastern port interests—they are still holding up the development of the St. Lawrence Waterway. . . .

The negative character of our political rules also makes it uncommonly difficult for us to choose a President. Many of our outstanding political operatives—notably those who serve in the Senate—are virtually barred from a Presidential nomination because they are forced to get on record on too many issues. Inevitably they offend some important interest group, and therefore become "unavailable." Governors, who can keep their mouths shut on most national issues, have a much better chance to reach the White House. Moreover, the very qualities of caution and inoffensiveness which make a good candidate—Harding and Coolidge come most readily to mind—are likely to make a bad President.

An even more serious flaw in our scheme of politics is the difficulty in finding anybody to speak for the country as a whole. Calhoun would have argued that the national interest is merely the sum of all the various special interests, and therefore needs no spokesmen of its own—but in this case he clearly was wrong.

In practice, we tend to settle sectional and class conflicts at the expense of the nation as a whole—with results painful to all of us. The labor troubles in the spring of 1946, for instance, could be settled only on a basis acceptable to *both* labor and management: that is, on the basis of higher wages *plus* higher prices. The upshot was an inflationary spiral. . . . Countless other instances, from soil erosion to the rash of billboards along our highways, bear witness to the American tendency to neglect matters which are "only" of national interest, and therefore are left without a recognized sponsor.

Over the generations we have developed a series of practices and institutions which partly remedy these weaknesses, although we are still far from a complete cure. One such development has been the gradual strengthening of the Presidency as against Congress. As the only man elected by all the people, the President inevitably has had to take over many of the policy-making and leadership functions which the Founding Fathers originally assigned to the legislators. This meant, of course, that he could no longer behave merely as an obedient executor of the will of Congress, but was forced into increasingly frequent conflicts with Capitol Hill.

Today we have come to recognize that this conflict is one of the most important obligations of the Presidency. No really strong executive tries to avoid it—he accepts it as an essential part of his job. If he simply tries to placate the pressure groups which speak through Congress, history writes him down as a failure. For it is his duty to enlist the support of many minorities for measures rooted in the national interest, reaching beyond their own immediate concern—and, if necessary, to stand up against the ravening minorities for the interest of the whole.

In recent times this particular part of the President's job has been made easier by the growth of the Theory of Temporary Emergencies. All of us—or nearly all—have come around to admitting that in time of emergency special interest groups must forego their right of veto. As a result, the President often is tempted to scare up an emergency to secure legislation which could not be passed under any other pretext. Thus, most of the New Deal bills were introduced as "temporary emergency measures," although they were clearly intended to be permanent from the very first;

for in no other way could Mr. Roosevelt avoid the veto of the business interests.

Again, in 1939 the threat of war enabled the President to push through much legislation which would have been impossible under normal circumstances. And Mr. Truman recently found it necessary to present the Greco-Turkish situation under the guise of a world crisis, in order to get authority and funds to carry out a rather small, routine police operation.

VI

Because we have been so preoccupied with trying to patch up the flaws in our system, we have often overlooked its unique elements of strength. The chief of these is its ability to minimize conflict—not by suppressing the conflicting forces, but by absorbing and utilizing them. The result is a society which is both free and reasonably stable—a government which is as strong and effective as most dictatorships, but which can still adapt itself to social change.

The way in which the American political organism tames down the extremists of both the left and right is always fascinating to watch. Either party normally is willing to embrace any group or movement which can deliver votes—but in return it requires these groups to adjust their programs to fit the traditions, beliefs, and prejudices of the majority of the people. The fanatics, the implacable radicals cannot hope to get to first base in American politics until they abandon their fanaticism and learn the habits of conciliation. As a consequence, it is almost impossible for political movements here to become entirely irresponsible and to draw strength from the kind of demagogic obstruction which has nurtured both Communist and Fascist movements abroad.

The same process which gentles down the extremists also prods along the political laggards. As long as it is in a state of health, each American party has a conservative and a liberal wing. Sometimes one is dominant, sometimes the other. . . .

The strength of this tug is indicated by the fact that the major New Deal reforms have now been almost universally accepted. A mere ten years ago, the leading Republicans, plus many conservative Democrats, were hell-bent on wiping out social security, TVA, SEC, minimum-wage laws, rural electrification, and all the other dread innovations of the New Deal. Today no Presidential aspirant would dare suggest the repeal of a single one of them. In this country there simply is no place for a hard core of irreconcilable reactionaries, comparable to those political groups in France which have never yet accepted the reforms of the French Revolution.

This American tendency to push extremists of both the left and right toward a middle position has enabled us, so far, to escape class warfare. This is no small achievement for any political system; for class warfare cannot be tolerated by a modern industrial society. If it seriously threatens, it is bound to be suppressed by some form of totalitarianism, as it has been in Germany, Spain, Italy, Russia, and most of Eastern Europe.

In fact, suppression might be termed the normal method of settling conflicts in continental Europe, where parties traditionally have been drawn up along ideological battle lines. Every political campaign becomes a religious crusade; each party is fanatically convinced that it and it alone has truth by the tail; each party is certain that its opponents not only are wrong, but wicked. If the sacred ideology is to be established beyond challenge, no heresy can be tolerated. Therefore it becomes a duty not only to defeat the enemy at the polls, but to wipe him out. Any suggestion of compromise must be rejected as treason and betrayal of the true faith. The party must be disciplined like an army, and if it cannot win by other means it must be ready to take up arms in deadly fact.

Politics thus becomes merely a prelude to civil war—and all too often the prelude is short. In Italy the Partisan brigades are drilling today on the same parade grounds where Mussolini's Blackshirts once trained for their march on Rome. And in France both Communists and DeGaullists are reported to be squirreling away Bren guns against the day when each expects to "save the Republic" from the other.

Under this kind of political system the best that can be hoped for is a prolonged deadlock between parties which are too numerous and weak to exterminate one another. The classic example is prewar France, where six revolutions or near-revolutions broke out within a century, where cabinets fell every weekend, and no government could ever become strong enough to govern effectively. The more usual outcome is a complete victory for one ideology or another, after a brief period of electioneering, turmoil, and fighting in the streets; then comes the liquidation of the defeated.

Because this sort of ideological politics is so foreign to our native tradition, neither Socialists, Communists, nor Fascists have ever been accepted as normal parties. So long as that tradition retains its very considerable vitality, it seems to me unlikely that any third party founded on an ideological basis can take root. The notion of a ruthless and unlimited class struggle, the concept of a master race, a Fascist élite, or a proletariat which is entitled to impose its will on all others—these are ideas which are incompatible with the main current of American political life. The uncompromising ideologist, of whatever faith, appears in our eyes peculiarly "un-American," simply because he cannot recognize the rule of the concurrent majority, nor can he accept the rules of mutual toleration which are necessary to make it work. Unless he forsakes his ideology, he cannot even understand that basic principle of American politics which was perhaps best expressed by Judge Learned Hand: "The spirit of liberty is the spirit which is not too sure that it is right."

Discussion

1. What is the common argument against the two-party system? Why does the author begin by presenting it?
2. Does the author define the "doctrine of the concurrent majority"? Phrase a definition of your own based on this essay.
3. What is the popular understanding of the terms *lobbies, filibuster, log-rolling?* Contrast the popular conception of each with that advanced by the author.
4. What is meant by the word *eligibility* as it is used in section IV? What are the advantages and the disadvantages of the system of eligibility?
5. What is meant by *ideology* (section VI)? Why are ideologically organized parties not characteristic of American political life?
6. What are the advantages and disadvantages of the two-party system as given in this essay? Can you think of other advantages or disadvantages? What attempts are being made to overcome the disadvantages?
7. What is the logic behind the division of the essay into six sections?

8. Evaluate the operation of some club, fraternity, or other organization to which you belong. Does this organization function according to the "unwritten rules of American politics?"

JAMES BRYCE · *What Is Democracy?*

The word Democracy has been used ever since the time of Herodotus to denote that form of government in which the ruling power of a State is legally vested, not in any particular class or classes, but in the members of the community as a whole. This means, in communities which act by voting, that rule belongs to the majority, as no other method has been found for determining peaceably and legally what is to be deemed the will of a community which is not unanimous. Usage has made this the accepted sense of the term, and usage is the safest guide in the employment of words.

Democracy, as the rule of the Many, was by the Greeks opposed to Monarchy, which is the rule of One, and to Oligarchy, which is the rule of the Few, *i.e.* of a class privileged either by birth or by property. Thus it came to be taken as denoting in practice that form of government in which the poorer class, always the more numerous, did in fact rule; and the term *Demos* was often used to describe not the whole people but that particular class as distinguished from the wealthier and much smaller class. Moderns sometimes also use it thus to describe what we call "the masses" in contradistinction to "the classes." But it is better to employ the word as meaning neither more nor less than the Rule of the Majority, the "classes and masses" of the whole people being taken together.

So far there is little disagreement as to the sense of the word. But when we come to apply this, or indeed any broad and simple definition, to concrete cases, many questions arise. What is meant by the term "political community"? Does it include all the in-

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— From James Bryce, *Modern Democracies.* Copyright 1921 by The Macmillan Company and used with their permission.

habitants of a given area or those only who possess full civic rights, the so-called "qualified citizens"? Can a community such as South Carolina, or the Transvaal, in which the majority of the inhabitants, because not of the white race, are excluded from the electoral suffrage, be deemed a democracy in respect of its vesting political power in the majority of qualified citizens, the "qualified" being all or nearly all white? Is the name to be applied equally to Portugal and Belgium, in which women do not vote, and to Norway and Germany, in which they do? Could anybody deny it to France merely because she does not grant the suffrage to women? Or if the electoral suffrage, instead of being possessed by all the adult, or adult male, citizens, is restricted to those who can read and write, or to those who possess some amount of property, or pay some direct tax, however small, does that community thereby cease to be a democracy?

So again, what difference is made by such limitations on the power of the majority as a Constitution may impose? There are communities in which, though universal suffrage prevails, the power of the voters is fettered in its action by the rights reserved to a king or to a non-elective Upper House. Such was the German Empire, such was the Austrian Monarchy, such are some of the monarchies that still remain in Europe. Even in Britain and in Canada, a certain, though now very slender, measure of authority has been left to Second Chambers. In all the last mentioned cases must we not consider not only who possess the right of voting, but how far that right carries with it a full control of the machinery of government? Was Germany, for instance, a democracy in 1913 because the Reichstag was elected by manhood suffrage?

Another class of cases presents another difficulty. There are countries in which the Constitution has a popular quality in respect of its form, but in which the mass of the people do not in fact exercise the powers they possess on paper. This may be because they are too ignorant or too indifferent to vote, or because actual supremacy belongs to the man or group in control of the government through a control of the army. Such are most of the so-called republics of Central and South America. Such have been, at particular moments, some of the new kingdoms of South-Eastern Europe, where the bulk of the population has not yet learnt how to exercise the political rights which the Constitution gives. Bulgaria and Greece were nominally democratic in 1915, but the king of the former carried the people into the Great War, as the ally of Germany, against their wish, and the king of the latter would have succeeded in doing the same thing but for the fact that the Allied fleets had Athens under their guns.

All these things make a difference to the truly popular character of a government. It is the facts that matter, not the name. People used to confound—some persons in some countries still confound—a Republic with a Democracy, and suppose that a government in which one person is the titular and permanent head of the State cannot be a government by the people. It ought not to be necessary nowadays to point out that there are plenty of republics which are not democracies, and some monarchies, like those of Britain and Norway, which are. I might multiply instances, but it is not worth while. Why spend time on what is a question of words? No one has propounded a formula which will cover every case, because there are governments which are "on the line," too popular to be called oligarchies, and scarcely popular enough to be called democracies. But though we cannot define either Oligarchy or Democracy, we can usually know either the one or the other when we see it. Where the will of the whole people prevails in all important matters, even if it has some retarding influences to overcome, or is legally required to act for some purposes in some specially provided manner, that may be called a Democracy. In this book I use the word in its old and strict sense, as denoting a government in which the will of the majority of qualified citizens rules, taking the qualified citizens to constitute the great bulk of the inhabitants, say, roughly, at least three-fourths, so that the physical force of the citizens coincides (broadly speaking) with their voting power. Using this test, we may apply the name to the United Kingdom and the British self-governing Dominions,[1] to France, Italy, Portugal, Belgium, Holland, Denmark, Sweden, Norway, Greece, the United States, Argentina, and possibly Chile and Uruguay. Of some of the newer European States it is too soon to speak, and whatever we may call the republics of Central America and the Caribbean Sea, they are not democracies.

Although the words "democracy" and "democratic" denote nothing more than a particular form of government, they have, particularly in the United States, Canada, and Australia, acquired attractive associations of a social and indeed almost of a moral character. The adjective is used to describe a person of a simple and friendly spirit and genial manners, "a good mixer," one who, whatever his wealth or status, makes no assumption of superiority, and carefully keeps himself on the level of his poorer or less eminent neighbors. I have heard a monarch described as "a democratic king."[1] Democracy is supposed to be the product and the guardian of both Equality and of Liberty, being so consecrated by its relationship to both these precious possessions as to be almost above criticism. Historically no doubt the three have been intimately connected, yet they are separable in theory and have sometimes been separated in practice.

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[1] Subject, as respects the Union of South Africa and its component States, to the remark made above regarding persons of colour. [Author's note.]

Discussion

1. The function of a definition is to classify a thing and then to give the differentiae which distinguish it from other members of its class. Analyze this selection as a definition. What class or genus is Democracy said to belong to? What differentiae are given?
2. How many of the following common aids to definition are used?
   - negative definition
   - historical development
   - etymology
   - example
   - comparison and contrast
   - analysis of difficulties in the application of the term, or of terms used in the definition itself
3. Does the author make any evaluations of particular democracies in the course of his definition?
4. Which of Bryce's facts have become outdated since 1921? Would you make any changes, in the light of developments since 1921, in the list of democracies which occurs near the end of paragraph 6 (beginning, "All these things make . . .")?
5. How are questions used in the selection?

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[1] I have read American writers who hold that the ownership of "public utilities" is what makes a country democratic. [Author's note.]

Writing

A. Write a brief summary in your own words.

B. Write a short essay in which you define, informally but carefully, either an abstract or a concrete term such as the following: courtesy, loyalty, righteousness, sin, citizen, juvenile delinquent, fish, sonnet, certified public accountant, supermarket, guinea pig, precinct captain, flash flood.

FELIX FRANKFURTER • *A Rigid Outlook in a Dynamic World*

The future is not a clean slate. The life of society, as of the individual, is a palimpsest. What has been, or at least what we think about what has been, may very considerably influence what will be. The shape of things to come depends not a little upon the remembrance of things past. One of the strange paradoxes about man is his disdain of theory as theory and the dominance of theory in practice. William James spoke of "irreducible and stubborn facts." But I think I can summon history to witness that theories can be even more stubborn than facts. Men who suggest that no one who has not had to meet a payroll is entitled to speak on social policy sometimes seek to meet their payrolls on theories whose validity they have never critically examined, or whose origin was based on facts which have long since been supplanted. The elder Huxley once said there is nothing more tragic than the murder of a big theory by a little fact. But he hastened to add that nothing is more surprising than the way in which a theory will continue to live long after its brains are knocked out.

2 Dominant theories concerning the individual and society determine our mental climate, and our mental climate—the intellectual and moral atmosphere which we breathe—determines the outcome of specific issues much more than the so-called intrinsic merits of these issues. It is well, therefore, to disengage ourselves from too

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—From *Survey Graphic,* January, 1938. Reprinted by permission of Justice Felix Frankfurter and Survey Associates, Inc.

much absorption in present conflicts, and, instead, to examine critically our general outlook and attitude.

3 Two notions exert powerful and destructive sway over us—the assumption of a Golden Age and the hope of a Utopia: a Golden Age that never was and a Utopia that never will be. These beliefs are powerful because they are rooted in romance, and for the same reason they are destructive. They provide the satisfaction of fairyland, but cloud the mind and debilitate the will in facing the realities of an intractable world.

4 Let me translate these airy generalities into concreteness. Our major domestic issues are phases of a single central problem, namely, the interplay of enterprise and government. Taxation, utility regulation, control of the security markets, labor standards, housing, banking and finance, all these current issues turn essentially on the relation of government to money-making and of money-making to government. This central problem was with us long before the New Deal and will be, long after it has passed into history. The controversies which it engenders have at bottom not been differences over details, but as to essential attitudes toward the organic nature of modern, large-scale, industrialized society, and ultimately turn on the conception of the relation of individuals one to another in the circumstances of our society. It is one thing to oppose a specific measure because economically unsound or administratively unworkable or because the cure would be worse than the disease. Quite a different thing is it to oppose some empiric measure, aimed at the correction of a specific evil or for the promotion of some concrete public good, because it runs counter to what are believed to be eternal verities embodied in slogans or formulas which themselves are merely expressive of the specialized experience of the past. Whatever may be the right or the wrong of Maynard Keynes' particular economic views, that he is one of the great economic thinkers of the western world would hardly be gainsaid. And yet he has written a book, as part of a struggle of escape from habitual modes of thought and expression, to prove that the so-called classical theory of economic thought in which he was educated had merely special and not general applicability, and that the characteristics of the special case assumed by the classical theory happened not to be those of the economic society in which we actually live.

5 But see how a dogmatic position to the contrary—confronting the actual problems of society with inherited tags and phrases—operates in a concrete case. Just about a quarter century ago a committee of the United States Senate had before it a bill to raise the weight limit on fourth-class mail from four to eleven pounds, in a word to extend the services of the United States post offices to include a system of parcel post. The measure was opposed not by a showing of the probabilities of its economic effects in the light of experience, but "on the broad general grounds that the government should not further engage in competition with its citizens; that our government has already approached the halting line of socialistic and paternalistic legislation." And this in the administration of President Taft! Not only was the favorable European experience not deemed relevant; it proved that the proposal was un-American. Let me read from the record:

> "I have just returned," a witness testified, "from Europe and over there I found conditions exceedingly bad under their system. Why, what they are having now are bread riots in England."
>
> *The Chairman:* "Due to parcel post?"
>
> *The Witness:* "Largely due to their system, and parcel post is a part of that system. . . ."

6 I have read this not for the purpose of gaiety but because in the mental attitude that it reveals, widely and sincerely as it is held, we have, I believe, the source of our greatest difficulty, the difficulty of a rigid outlook upon a dynamic world. The grounds of objection to the parcel post bill which I have quoted are not mere historical curiosities. Socialism, alien ideas, dictatorship, bureaucracy, centralization, and their like are the recurrent themes encountered in the legislative history of the United States for a full half century. Not for a moment do I mean to suggest that the more active intervention of government in the affairs of men does not raise serious questions for the proper safeguarding of those individual rights that constitute a fundamental difference between autocracy and democracy. I do not, of course, imply that all the laws that have found their way on the statute books during the last fifty years were wisely framed or effectively administered. But I do insist that if every attempt to remove abuses of our system

or to promote its avowed ends has encountered the obstruction of abstract notions about government as the enemy of society rather than as its appropriate instrument in appropriate cases, such abstract notions are discredited by the record of history. For it cannot be that half a century of American government—one third of our whole national existence under the leadership of both parties and the different wings of each party—can consistently have sponsored legislation which deserved to be denounced as alien and un-American.

7 Would there were time to document this history of federal legislation—and the same story could be told in the sphere of state legislation—beginning with the administration of Grover Cleveland. A few instances—taken at random—must suffice. This year marked the fiftieth anniversary of the first major intervention of the federal government, barring the tariff, into the area of economic enterprise. Today we take the Interstate Commerce Commission as much for granted as we do the post office. Yet some of the most powerful influences in the land opposed the initial step, as though it foredoomed the American system. Its very idea was abhorrent. "If this bill shall become law," said Senator Leland Stanford, himself a great railroad figure, "its consequences will be most disastrous . . . to the varied business interests of the country." And, speaking for Massachusetts, Senator Hoar announced that "the passage of this bill will create a panic." Senator Platt of Connecticut found things in the bill that he called "anti-Christian," and expressive of "the old pagan idea," "the old despotic idea." Similar sentiments were expressed by the leading members of the House. One of them protested against putting "the commercial and industrial interests of the country into the grasp of a single commission of men," and to another it was "a gigantic stride toward paternal government." One member of the House, however, ventured the prophecy that a later generation would be mystified by these unbridled fears. "The time will come," the then obscure Robert M. La Follette told the House, "when it would be a marvel how such abuses ever arose and why they were so long tolerated; when all parties alike will wonder how the just and simple provisions of this initiatory measure ever created such bitter and uncompromising opposition."

8 Let us take another instance. When in 1893 an income tax calculated to yield $30 million a year was passed, both in and out

of Congress the measure was assailed as though it could only have emanated from traitors to the Republic. According to the *New York Sun,* "Never in the history of this country has so effective a measure been proposed for the creation and maintenance of tramps as the income tax." And the *New York Evening Post* foretold that the country would be ruined by the "accelerating evils of such socialistic legislation." According to Senator David B. Hill, the leader of the fight against the tax, "It was a discriminating, a sectional, a communistic tax." And Senator Sherman of Ohio summed it all up as "socialism, communism, devilism."

9 And a final instance. It may come as a surprise to those who did not live through the enactment of the federal reserve act of 1913 that it too encountered the traditional abstract objections. According to the then president of the Chase National Bank, it was "socialistic" and sounded the "death knell" of the national banks. The leading bank president of Chicago characterized the act as "unjust and un-American." And once again the shadow of dictatorship fell across the floors of Congress. "This bill . . . is a confession of dictation and absolutism, the like of which has no parallel in American annals."

10 Only in the fair perspective of this continuous interplay between government and economic enterprise, for fifty years at least, are the present controversies really intelligible. And the lesson we draw from this history will largely determine the shape of things to come. Surely the social historian of the United States will, on the whole, conclude that the course of events since 1887 has contained great social waste and much needless social friction. Not because, in a democracy, opposition to legislation is not in itself a contributing factor, nor because specific enactments should not have been opposed in detail and sometimes even delayed in passage. The social waste has derived from the fact that obvious reforms, now recognized of all men, were unduly delayed, and in the intransigent opposition to legislation as such, the democratic legislative process was deprived of indispensable constructive criticism from those with special knowledge even though sometimes also with special interests.

11 Such an attitude of intransigence, deeply rooted in loyalty to abstractions, is at bottom the offspring not of self-interest but of self-deception and misconception. What is wrong is not devotion to

inherited ideas—they form, as Professor Whitehead has told us, "the tradition of our civilization." But such traditional ideas are never static, "they are either fading into meaningless formulae, or are gaining power by the new lights thrown by a more delicate apprehension. . . . No generation can merely reproduce its ancestors. You may preserve the life in a flux of form, or preserve the form amid an ebb of life."

12 Now the era of physical expansion after the Civil War was exceptionally favorable to the development of an aggressive and intransigent individualism which imperceptibly but powerfully lent itself to building up an anti-social psychology and certainly an anti-governmental mentality. In our kind of society there is bound to be a measure of conflict between self-interest and social control. We believe in competition, in the excitement of conflict and the testing of man against man in a fair fight. We not only like these things for themselves, as the spontaneous expression or personality in a free society; we also depend on them to get things done. At least of our economic system the dynamo is self-interest—a self-interest which may range from mere petty greed to admirable types of self-expression.

13 We must recognize this powerful drive of self-interest to perform the complex tasks of modern society. But in the circumstances of our time it cannot be trusted to do the whole job by itself. And so, various forms of collaborative enterprise, including the largest club to which we all belong, namely, the government, must step in, first, to rein up self-interest where it is doing harm, and, secondly, to perform those tasks of mutual aid which must be done communally. And in the resistance to these practical, empiric, *ad hoc* interventions of organized society by doctrines which either have become obsolete or only partially valid because qualified by counter-doctrines, we find the clue not only to the history of the last fifty years but to the tensions of the future. Once there is adequate recognition of the intrinsic complexity of the problems that confront us and the extremely limited range of issues that can be settled out of hand by invoking general formulas, however hallowed, the whole mental climate in which these problems are thought out and worked out will be changed. For then it will become manifest that the science of government is really the most difficult of all the arts, that it is, in the language of one of the great

justices of the Supreme Court uttered more than a hundred years ago, "the science of experiment."

14 Once our temper of mind towards the problems that confront us has changed, it ought to be more easy for us than for any other people, by virtue of our good fortune, to achieve with measurable success a gracious and civilized society.

15 For were Milton to address us, the rulers of this land, as he addressed the rulers of England three hundred years ago, he could justly say:

> Consider what nation it is whereof ye are, and whereof ye are the governors; a nation not slow and dull, but of a quick, ingenious and piercing spirit, acute to invent, subtle and sinewy to discourse, not beneath the reach of any point, the highest that human capacity can soar to.

Discussion

1. State briefly in your own words what the author regards as the major domestic problem of our time, and what he considers the chief obstacle to the rational solution of the problem.
2. Does the essay seem a partisan interpretation? What evidence of fair-mindedness and objectivity can you point out?
3. What, specifically, is the idea of the first paragraph?
4. What is the function of the second sentence in paragraph 2?
5. Does the author convince you that we are dominated by notions of a Golden Age and of a Utopia? Does he need to convince you in order to present his main idea persuasively?
6. What is the point and the effectiveness of the quotation from Milton at the end of the article?
7. Discuss the paragraphing, answering the following specific questions:
    a. Could paragraphs 1 and 2 be made a single paragraph? Could the same be done with paragraphs 3 and 4?
    b. What do paragraphs 5, 7, 8, and 9 have in common?
    c. What are the topic sentences of paragraphs 6, 7, and 11?
    d. Find a paragraph in which the topic sentence does not begin the paragraph.

   e. By what means is the topic idea developed in paragraphs 7 and 12?

8. Since the essay is a highly compressed statement of an abstract problem, the diction may offer difficulties. What is the meaning, in context, of the following words? Determine how many of them are made clear in the article, how many you have to look up in a dictionary. The numbers refer to paragraphs.

   paradox (1); *debilitate, intractable* (3); *engenders, organic, empiric* (4); *dogmatic* (5); *autocracy* (6); *despotic, initiatory* (7); *absolutism, annals* (9); *ad hoc* (13).

9. Explain fully the following: *the intellectual and moral atmosphere which we breathe* (2); *the interplay of enterprise and government* (4); *eternal verities embodied in slogans or formulas which are themselves merely expressive of the specialized past* (4); *intransigent opposition to legislation as such* (10); the quotation from Professor Whitehead in paragraph 11; *anti-social psychology* and *anti-governmental mentality* (12).

GRAHAM HUTTON • *Farmers of the Middle West*

I recall many winter evenings with Midwest farmers—in Illinois, Wisconsin, Iowa, Ohio, Minnesota—when, neighbors having been advised (or perhaps I ought to say, warned), about twenty would foregather in one farmhouse just to talk. The visiting wives would get someone to look after their children and come over to the host's farm to help the hostess with the baking and preparations. They would bring jars of this or that, or a pie, or a cake. The men would bring bottles of this or that, too. The icicles would hang by the barn door, swordlike. The snow would crackle underfoot in the temperature of zero to 30° below. Through the double storm windows far away the little lights of nearest neighbors would twinkle like grounded stars. At six we would see the headlights of

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—— *From Midwest at Noon*, by Graham Hutton. Copyright 1946. Reprinted by permission of Graham Hutton and the University of Chicago Press.

cars steadily eating up the straight, white, snow-deep roads and finally snaking along the driveway up to the farm. Muffled, their occupants would come in, greeting each other only by first names: "Ned," "Matt," "Charlie." . . . There would be an intense, hushed, and entirely propitious bustling in the kitchen in the rear. The summons would come, and we would sit down, nine or ten a side, host and hostess at either end, the other ladies "in waiting," to a dinner which fairly sang of Midwest hospitality: fresh mushroom soup; two kinds of chicken or pork; lima and string beans, baked potatoes, corn biscuits, preserve of baby strawberries and butter with the biscuits; salad of lettuce with fresh cranberry and pomegranate jello thereon; ice cream and maple syrup or three kinds of pie; and coffee. (I know they did not eat like that ordinarily. But I also know they could do it regularly for the enjoyment of their friends and for an evening in their own home.) In the offing, over the banisters, curious and wide-eyed youngsters, regularly shooed off to bed and as regularly returning, would give the false impression of Christmas eve. Afterward the ladies washed dishes—none would dream of leaving that pile for the hostess next morning—and then we would talk, and the ladies would join us.

Of all the talk and discussion I had in the Midwest, I think I relished that in the farmhouses most; and not only because of the preliminaries. It was direct, elemental, simple, often oversimplified, but extremely rational and open-minded. There was an evident readiness to change opinions upon fair, logical conviction. Those fundamental and remarkably searching political discussions in the stores, taverns, farms, and courthouses of Ohio and Indiana and Illinois before the Civil War do not seem so long ago when you go among Midwest farmers today. This may seem very near to romantic idealism; but it goes on. It simply is not heard of by the three-fifths of the population who are city dwellers in the Midwest. And that seems to me a pity for both of the great divisions of the Midwest people. "There is a great gulf fixed. . . ."

One reason for this division is the greater speed with which the Midwest farming community has assimilated foreign or other American immigrants to an over-all pattern of rural life. This assimilation is almost complete and utterly unlike the state of affairs in the cities and middle-sized towns. Almost anywhere in the region today, if you take one of the county seats and look at the land titles or records, or comb the area around, you will find American farmers of Anglo-Saxon, Celtic, German, Scandinavian, Bohemian, Ukrainian, and other Slav origins. You will find Methodists, Baptists, Presbyterians, Congregationalists, Unitarians, Episcopalians, Lutherans, Roman Catholics, Greek Orthodox, Jews (only in the town), Quakers, Christian Scientists, Seventh-Day Adventists, Jehovah's Witnesses, and many you may never have heard of before. But if you leave an area with a majority of German or Scandinavian Lutheran farmers and go to one with a majority of Anglo-Saxon Methodists, or to one with a majority of Russian Orthodox (and I have been to some), or to one with a majority of Bohemian Hussites, you will note only slight and superficial differences among those communities, no different pattern of life, and only differences in politics or outlook on national or international affairs.

In one county seat of 14,000 souls in Ohio, for instance, I found Americans of fifteen national origins with twenty-three different churches, excluding different branches of one and the same church. Mason City in Iowa, with 27,000 inhabitants, when I was last there, had Episcopalian, Roman Catholic, Presbyterian, Baptist, Congregational, and Greek Orthodox churches and a synagogue; but it had two Methodist churches, five Lutheran—two German, a Norwegian, a Swedish, and another Eastern United Lutheran church —two Negro churches, and one remarkable evangelical, undenominational "radio church" with a big unseen congregation of listeners. The people of the city came from forty different national origins in Europe, including Iceland, and some years ago they were from fifty-five such national origins. Mason City, apart from being the seat of an agricultural county, is partly a manufacturing town and is, in any case, not "truly rural"; it is a middle-sized town. I mention it again in this context because I have described its near-by farmers. But these cases could be paralleled, with variations, throughout the agricultural areas of the region. Yet the social uniformity and single pattern of farm life covers them all.

The morality of the farmers in the Midwest is strict. In both their private and their community life their religions, no matter how great their differences of dogma or theology, have budded forth into an ethic of fair dealing. The sins of the rural families and communities in the region are naturally as human as those of any city dweller, but they are less varied and more elemental: mainly crimes of sex and personal violence, often ascribable to liquor. There is more looseness in sex morality than appears on the surface—or in court! The "shotgun wedding" is still common, even if a shotgun is no longer necessary; and the two parties resume a respected position in society. There is much less theft and almost no housebreaking, robbery with violence, holdups, racketeering, blackmail, and so on. In the farming and rural community, the greater social uniformity is reflected in a greater uniformity of morality. Indeed, there is a more commonly recognized and observed code of behavior there than in the middle-sized manufacturing towns and cities.

I have already noted the unparalleled neighborliness and mutual help of the rural community in the Midwest; but it is worth noting that there are severe and recognized limits to this. Kindness in "trouble" and mutual aid—"trouble" is a capacious portmanteau word in the region—are general and dependable. But the same farmer who will help out on a sick neighbor's farm will not give him an ounce of seed, or yield an inch while bargaining, if he feels that the context is one of trade or business and not of human need. They are as tender, sympathetic, kind, and hospitable as their womenfolk toward the visiting stranger or the needy; but with the non-needy they will drive the hardest and closest bargain possible. And townsmen are an object of initial distrust—with good reason, if you are to go by the history of prairie settlement or the ubiquity of smoking-room stories about the behavior of "drummers."

The severe self-reliance in the farmer's struggle with soil and elements, his geographical insulation from others most of the time, individual responsibility for his acts and decisions, the dependence of his kith and kin and way of life on those acts and decisions, the headship of his little family-community in its isolated acres—all these things make him tend to bring up his children with a sense of the hardness and unpredictability of life. Wherever the children go in the rural community they get the same philosophy, except at school. It is part of the social uniformity. Accordingly, the rural background of the Midwest has been a forcing bed to so many promising youngsters. The better they were at school, the more, by contrary tugging and opposition and rebellion, did they strive to leave the rural life. Thus the farms and the rural community have engendered much ambition and energy—especially the energy of contrariness and "anti" feelings—and have tended to say what the Scotch say of Scotland or the Irish of Ireland: "A fine country to get away from!" And look what the Scotch and Irish have done in the world—or in England, for that matter—and where they now are in it! The farm boys of the Midwest have been, and still are, its "Scotch and Irish." Again, perhaps it is the contrariness and desire for change which drive so many farm boys away to sea, or into the air, or into the cities. Moreover, there is no room in the Midwest for every son of every farmer to become a farmer, and the room is shrinking.

Few city dwellers realize how pervasive in the Midwest is this influence from farms or rural towns. Some states in the region —Wisconsin, Minnesota, and Iowa—are more dependent on farms and farm products than on anything else. With few large cities, these states form the newest, northwest section of the region. It is predominantly agrarian in its pattern of life and therefore different in atmosphere, political outlook, and attitude from the other five Midwest states. This has significant results. For example, of the roughly two and a half million souls in Iowa, about half form the male and female electorate; and, after less than a century of settlement in the state, a surprisingly large proportion of them actually know, or know of, nearly all political candidates personally and have relatives or connections by marriage throughout the state. Such social compactness in an overwhelmingly agricultural region is rare. It is not found in Europe or in the East of America, where families have been settled far longer but have forgotten or ignore their relatives. I should like to add here, as a pointer to the impact of war on the farms, that, of Iowa's one and a half million souls of both sexes and all ages over eighteen, more than 300,000 went into the armed forces of the United States in the Second World War.

This vast reserve of farming communities throughout the Midwest, always going on with their steady life behind the cities and towns, is of enormous importance to the region as a whole—and to the people of the towns and cities, even if they only think of the farmers when they go motoring or cannot get something for their table. For, vastly different as the life of the cities is, many of the city dwellers' characteristics came, and are still being renewed, from the farming communities.

Discussion

1. Would your picture of the Midwest be as rosy as Hutton's? Point to details in his essay that seem to you either misleading or especially typical of Middlewestern life.
2. What are the major or "Roman-numeral" topics into which the selection can be divided?

STUART CHASE · *The World of George Rutherford Adams*

Another way to bring the culture concept home is to take a neighbor in one's community and try to find out the sources of the cultures which have molded him. Warner and Lunt in their excellent *Yankee City* series have done this in statistical and scholarly detail, but we will be content with a more impressionistic survey.

Here, for instance, is George Rutherford Adams, an imaginary character who runs a garage, filling station, and milk bar in Middleburg, Connecticut. On the Warner and Lunt six-class scale, he would be a member of the lower middle class which, when bracketed with the upper middle, contains the most energetic and dependable citizens in the community. He is thirty-one years old, five feet nine, weighs one hundred and fifty-eight pounds, and was a bombardier with the 16th Air Force in the war. He is a Legionnaire, an Elk, and an active member of the Middleburg Volunteer Fire Company; he goes to the Congregational Church half a dozen times a year. Junior is four, and the baby is eighteen months. His wife taught seventh grade in the Hill school before he married her.

George likes to listen to ball games over the radio as he works in his shop, and he loves to go trout fishing in the spring. He is a Republican in town politics, but twice he voted for Franklin Roosevelt. He is well regarded in Middleburg, for at one time or another his wrecker, a 1930 Pierce Arrow, has pulled nearly everyone in town out of a ditch.

— From *The Proper Study of Mankind* by Stuart Chase. Copyright, 1948, by Stuart Chase. Reprinted by permission of Harper and Brothers.

What kind of being is George Rutherford Adams? What shaped him? How did he get to be what he is? We know that he is the product of a group and the culture which goes with it. What group and what culture? Here we encounter a hierarchy of attachments and loyalties. George is not the product of a single culture, as the Greenland Eskimo is (or was), but of a whole ring of cultures, one inside the next. His group, meanwhile, is now so large that it covers a continent—though we can also distinguish a number of subgroups to which George belongs.

He identifies himself loyally with Middleburg, with Connecticut, with New England, in a declining scale. His major loyalty, however, is to the USA, with its three million square miles and 145 million neighbors. This has now become his community, his We-group, in the most binding sense of the term, as it is mine, and probably yours—unless you live in Texas, which is a special case. It is so by the test of a common culture as well as by national sovereignty. The concrete highway, even more than the railroad, has broken up the old local patterns, and is making "home" mean to Americans a place where you can get a good ice-cream soda. decent service at a filling station, beauty shops, ice-water, sports writers who make sense, and Bing Crosby. . . .

The nation has also become George's *economic* unit in these days of fresh vegetables from California, lumber from Oregon, and oil from Louisiana. In the times of Obadiah Adams, deacon of the Methodist Church, blacksmith of Middleburg, and George's great-great-grandfather, the town came first, Connecticut also claimed a fierce loyalty, but New York State was practically a foreign country separated by a tariff wall. America, reaching way out to the wilds of Ohio, was a pretty vague concept to Obadiah. He never went fifty miles from where he was born in all his life. His economic region lay within that radius; even the iron for his horseshoes came from the Connecticut hills. He knew the face and name of everyone in town, and many in the region.

George has heard much about rugged individualism. He may think he is on his own, above the crowd, responsible only to himself and to his God, but the facts do not bear out his assumptions. In Middleburg there are many, many things he might like to do, but cannot do, because the folkways forbid it. For instance, he may not whistle in church, or grow a beard, or strike a woman, or eat with his fingers, or take off his clothes in public on a hot day, or wear brown shoes with a tuxedo or bright colors at a funeral, or appear at the Elks' Hall with a patch on his coat. His freedoms are strictly relative. George can choose his necktie from the rack, but he must wear a necktie at the appropriate times. Certain foods highly prized among many peoples, such as eels, snails, certain kinds of grubs, he does not think fit to eat. Although his hunger is physical and common to all men, his recognition of how he will satisfy it is cultural.

Superstitions have declined somewhat since Obadiah's day, but George still avoids walking under ladders, would rather not sign a contract on Friday the thirteenth, and wants no black cats to cross the road. He is perfectly sure, too, that Ellery Sanford can find water every time with that willow wand.

Where did these codes and beliefs come from? They started coming to George at the moment the doctor slapped him on the back, and he let out his first yell. They came from parents, teachers, schoolmates, relatives, truck drivers, drill sergeants, ministers, policemen, store-keepers, the drug store gang, from nearly everyone who crossed George's path during his impressionable years. Think, for instance, of all the people who taught him to talk, including the voices on the radio.

Where did *they* get the codes? From the generation which inducted them. There was nothing floating in the air; codes always come from people. A few of the simpler habits, like drinking from a cup, or sitting on a chair rather than on the ground, may have been handed down unchanged for twenty generations. Altogether we can identify at least five major cultural rings from which most of George's behavior is derived.

1. To begin with the broadest, he is a product of *civilization*. For more than 6,000 years the group from which he descends has practiced a widespread division of labor and city living, based on the invention of a storable grain. This marks off his behavior from nature peoples who never developed cities, writing, architecture, or mathematics. At the same time it connects George with the peoples of India, China, Persia, and other areas where civilization as defined has been long in evidence. To him personally it means, among other things, living in a house, going to school, eating cereals, paying taxes, using money.

2. Next comes *Western civilization* as distinct from other civilizations. From this source George gets the Christian religion, many of his standards of right and wrong, Arabic numerals, nationalism and the sovereign state, modern science and technology, tinkering with machines, music in the diatonic scale, the free market —now, alas, much corrupted with monopolies and government controls—property rights, pecuniary emulation, and military conscription, to name a few.

3. The next smaller ring is *Anglo-Saxon culture*—that part of Western civilization in which English is spoken. Here George learns his language—*the most important single element in his entire cultural inheritance.* Without language the members of the group could not communicate, and would rapidly disintegrate. Man would cease to be a human being. Here, too, he learns to vote and believe in *habeas corpus*, the Bill of Rights, political democracy, the idea of progress, and romantic love as the only proper basis for marriage. He acquires a streak of Puritanism, a strong sense of superiority to foreigners, and the ability to cover up his emotions. He is taught to disapprove of people who shout and weep and wave their hands. For a grown man to cry in the presence of others is humiliating in the extreme. He stands nearer the Iroquois than the Latin peoples in this respect, but nearer the Latins in his public laughter.

4. Next comes *North American culture,* which George shares with English-speaking Canadians, but not with Mexicans. Here he picks up many words and place names and a few customs—like canoeing and corn roasts—which derive from the Indians. More than half the forty-eight states have Indian names, including his own Connecticut. He has been heavily influenced by the frontier pattern, for even New England was the frontier a few generations ago. This pattern helps to reinforce George's individualism and a certain social irresponsibility, especially toward public property and resources. Cut out, get out, move West, was the frontiersman's idea. The Pacific has long since been reached, but the irresponsibility remains, a cultural lag. It is shown in the fabulous wastes of top soil, timber, grasslands, natural gas, wastes which mean nothing whatever to George, but which communities in Europe could not tolerate. It is shown in the political immaturity and awkwardness of most Americans when faced with international contacts. There is nothing in their culture to help them cope with such situations.

Here are other patterns that North America gives to George: the great motor-car complex on which he makes his living, Hollywood, radio habits, the comics, mass production, bathrooms, a sublime belief in education, service clubs, baseball, the success story, a power of laughing at himself, juke boxes, jazz bands, and a propensity to spoil his children. Notice that we are mixing up material things with customs and attitudes, but so they are mixed in the cultural stream.

5. *New England* is the last ring. Though most of George's habits were learned there, its unique contributions to his way of life are few; far fewer than in Obadiah's case. George is more tolerant of Negroes, coming from an abolitionist area, than many Americans. New England has given him some favorite dishes, such as clam chowder with milk; a nasal twang in his speech, a disposition to be close-mouthed, to be thrifty and count his pennies, and to be suspicious of the neighbors; the moral virtue of early rising and hard work.

The Old Man of the Sea

We have given only the roughest indication of the items in each ring. To prepare a full account of the habits which George has learned, and largely follows without taking thought, would fill a library. Reflect a moment on the unthinking customs you yourself follow in a single day—from the time you get out of bed in the morning until you snap off the light at night. There must be thousands of them.

It is obvious that most of George's artifacts, habits, and systems of belief come from Western civilization, from the Anglo-Saxon culture, and from North America. The first has been in existence since Socrates, say for twenty-five hundred years; the second since Chaucer, say six hundred years; the third since Captain John Smith, say three hundred years, but the Indian additions to the last reach back much further; Indian corn probably antedated Homer.

George Rutherford Adams is an amalgam of these far-flung influences. Wherever he goes he carries this great cultural load—like the Old Man of the Sea. Nobody can get at him, talk to him, tell him anything except in relation to this burden. When he met Chinese, Burmese, or Dutch during his overseas service, he judged them by these standards, built into his nervous system as the transmission is built into a car. If he should take a tourist cruise in the Caribbean, he will judge Haitians, Cubans, Mexicans in a similar way. Unless he is aware of his reaction, it is unlikely that he will judge them fairly. Because their culture rings are somewhat different, many things they do will vary from what he does in similar circumstances, and he will blame them for it. At times the blame may flare into anger.

If we compare George with such a person as Laughing Boy, the Navaho hero of Oliver LaFarge's novel by that name, we see a strange and significant contrast. George is caught in a whirl of cultural rings, and an interdependent society far beyond the face-to-face range, which make his way of life more complicated and uncertain than that of the Indian. George can never be so sure what is the right thing to do, as Laughing Boy learned to be. His loyalties do not run to a single tribe, a definite cosmology, a straight and narrow path in all of life's main turnings.

George does not belong to anything very hard since he left the Air Force. He is worried, despite the breezy way he comes out to fill up your car. He had to borrow so much money to start his business, and prices have been so high. He is not sure what is in store for him and the family. He does not see clearly where he is going, or the country, or the world. The bomb, now, and those Russians, and the next depression. . . .

Laughing Boy's world was steady as a rock; but George's sometimes seems to be breaking apart.

BERGEN EVANS • *Ignorance Preferred*

Few speculations are more pleasing to popular philosophers than that of imagining the awe with which our ancestors or other primitive folk would be overwhelmed if they were brought face to face with a radio, an airplane, a machine for vending chewing gum, or any other of the mechanical marvels which our blasé generation

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takes for granted. And, as a sort of corollary, it is generally assumed that anyone with modern knowledge would have had the world in his grasp had he lived in the past or suddenly been set down among savages.

Both of these assumptions overestimate gadgets and underestimate people.

It is probably true that many things to which we have become accustomed (though most of us no more understand them than Methuselah) would seem magical to our ancestors. But it is we, rather than they, who would be amazed by magic. Habitude will make even the supernatural commonplace. Luther relates that, hearing a strange sound in the cloisters at Wittenberg one night, he was alarmed until he perceived that it was *only the Devil,* and went back to sleep.

So with some of our contemporaries. When Alexander Kirk, the first American minister to Saudi Arabia, flew to Riad, an engineer was sent ahead to prepare a landing field, no plane ever having been there before. As the engineer sat beside his radio waiting for the plane to come in, he told a curious Bedouin that a Djinn in the box had informed him that in an hour and a half a huge bird would appear bearing men in its belly. The Bedouin thought that would be worth waiting to see and the engineer eagerly anticipated his amazement when the plane should arrive. But when it did arrive, twenty minutes late, the Bedouin merely remarked that the Djinn had been incorrect in estimating the time!

Many mechanical devices are not truly efficient, or at least nowhere near so efficient as it pleases us to think them, and one not accustomed to them and to the paean of praise that surrounds them would probably perceive this at once. The demonstration a year or so ago that the trained operator of an abacus can whip the pants off the trained operator of an electrical calculating machine at adding and subtracting came as a jolt to our complacency—though not, be it said to his honor, to that of an official of one of the largest adding-machine companies, who cheerfully confessed that "the abacus is twice as fast as a machine." That it did not come as a stronger jolt shows the grip that gadgetology has on our minds.

Then we pay a high price for our gadgets and the visiting primitive or the revived ancestor might pay more attention to the price than the product. When we expected him to admire a car, he might well be shuddering at the traffic. Instead of gasping at an automatic bread slicer, he might gasp at the inferior quality of the bread being sliced. The ingenuity with which we enrich canned dog food with vitamins might not astonish him as much as the preposterousness of doing it at all. And when we tried to stun him with a display of 1948 furniture, we might find the perverse devil a few doors down the street grinning into the window of an antique or art shop at the prices we are willing to pay for some of the things *he* made.

The other illusion—that a man with modern knowledge would have the world in his grasp if he were miraculously transported into the past or thrown among savages—has furnished a score of comic strips and provided the basis for some very good novels. Mark Twain, Kipling, and H. Rider Haggard have all used it and thereby contributed happy hours to millions of boys. But it is a boy's dream. Wholly apart from ignoring the necessity of having the devices, the materials, and the myriad skills by which this knowledge can be utilized, these imaginings overestimate our power and underestimate the others' obduracy.

The ignorance of the past was upheld by some mighty solemn people and it was harder then than it is even now for truth to get a hearing. As G. B. Shaw has said, if Mr. Pickwick's physician had advised him to throw away his bed curtains and open his window at night, Mr. Pickwick would have changed not his habits but his physician. To have protested against phlebotomy or to have doubted the theory of the four humors when that practice and theory were current would have earned not the gratitude but the detestation of mankind.*

In reading history one is often moved to shout advice back down the vistas of time. A man feels that if he had been living in the age of witchcraft persecutions, say, he would have spoken sense and that particular installment in the serial calamity of humanity would never have been. But the least reflection is enough to show that this is a hallucination of hindsight. Our modern conclusions would have been undemonstrable and the skeptic would most likely have ended on the pyre, one more witch so far as the public was concerned.

Orthodoxy always has the advantages of possession. Stefansson, when he first came among the Copper River Eskimos, encountered a Shaman who, envious of the attention the visitor was attracting, professed to be quite familiar with the white man's land. He said that he had frequently visited it by magic and its wonders were old stuff to him. Stefansson challenged him to speak the white man's language and the Shaman responded by jabbering some gibberish. Stefansson triumphantly said that that wasn't any white man's language that he knew and at once found *himself* discredited. The Eskimos did not say, "Our Shaman is shameless," but rather, "The stranger is an impostor. He professes to be a white man but admits he does not understand the white man's language when our celebrated Shaman speaks it to him."

No and alas, much evidence suggests that our fathers and our savage brothers are too much like us to be easily impressed, credulous and incredulous at the wrong times, enamored of their own ignorance, learning the simplest things only through repeated disasters, and reserving their admiration chiefly for themselves.

WILL DURANT · *Is Progress a Delusion?*

Let us try to see the problem of progress in a total view. It is unnecessary to refute the pessimist; it is only necessary to enclose his truth, if we can, in ours. When we look at history in the large we see it as a graph of rising and falling states—nations and cultures disappearing as on some gigantic film. But in that irregular movement of countries and that chaos of men, certain great moments stand out as the peaks and essence of human history, certain advances which, once made, were never lost. Step by step man has climbed from the savage to the scientist; and these are the stages of his growth.

First, *speech*. Think of it not as a sudden achievement, nor as a gift from the gods, but as the slow development of articulate expression, through centuries of effort, from the mate-calls of animals to the lyric flights of poetry. Without words, or common nouns, that

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might give to particular images the ability to represent a class, generalization would have stopped in its beginnings, and reason would have stayed where we find it in the brute. Without words, philosophy and poetry, history and prose, would have been impossible, and thought could never have reached the subtlety of Einstein or Anatole France. Without words man could not have become man, nor woman woman.

Second, *fire*. For fire made man independent of climate, gave him a greater compass on the earth, tempered his tools to hardness and durability, and offered him as food a thousand things inedible before. Not least of all it made him master of the night, and shed an animating brilliance over the hours of evening and dawn. Picture the dark before man conquered it; even now the terrors of that primitive abyss survive in our traditions and perhaps in our blood. Once every twilight was a tragedy, and man crept into his cave at sunset trembling with fear. Now we do not creep into our caves until sunrise; and though it is folly to miss the sun, how good it is to be liberated from our ancient fears! This overspreading of the night with a billion man-made stars has brightened the human spirit, and made for a vivacious jollity in modern life. We shall never be grateful enough for light.

Third, *the conquest of the animals*. Our memories are too forgetful, and our imagination too unimaginative, to let us realize the boon we have in our security from the larger and sub-human beasts of prey. Animals are now our playthings and our helpless food; but there was a time when man was hunted as well as hunter, when every step from cave or hut was an adventure, and the possession of the earth was still at stake. This war to make the planet human was surely the most vital in human history; by its side all other wars were but family quarrels, achieving nothing. That struggle between strength of body and power of mind was waged through long and unrecorded years; and when at last it was won, the fruit of man's triumph—his safety on the earth—was transmitted across a thousand generations, with a hundred other gifts from the past, to be part of our heritage at birth. What are all our temporary retrogressions against the background of such a conflict and such a victory?

Fourth, *agriculture*. Civilization was impossible in the hunting stage; it called for a permanent habitat, a settled way of life.

It came with the home and the school; and these could not be till the products of the field replaced the animals of the forest or the herd as the food of man. The hunter found his quarry with increasing difficulty, while the woman whom he left at home tended an ever more fruitful soil. This patient husbandry by the wife threatened to make her independent of the male; and for his own lordship's sake he forced himself at last to the prose of tillage. No doubt it took centuries to make this greatest of all transitions in human history; but when at last it was made, civilization began. Meredith said that women will be the last creature to be civilized by man. He was as wrong as it is possible to be in the limits of one sentence. For civilization came through two things chiefly: the home, which developed those social dispositions that form the psychological cement of society; and agriculture, which took man from his wandering life as hunter, herder and killer, and settled him long enough in one place to let him build homes, schools, churches, colleges, universities, civilization. But it was woman who gave man agriculture and the home; she domesticated man as she domesticated the sheep and the pig. Man is woman's last domestic animal; and perhaps he is the last creature that will be civilized by woman. The task is just begun: one look at our menus reveals us as still in the hunting stage.

Fifth, *social organization.* Here are two men disputing: one knocks the other down, kills him, and then concludes that he who is alive must have been right, and that he who is dead must have been wrong—a mode of demonstration still accepted in international disputes. Here are two other men disputing: one says to the other, "Let us not fight—we may both be killed; let us take our difference to some elder of the tribe, and submit to his decision." It was a crucial moment in human history! For if the answer was No, barbarism continued; if it was Yes, civilization planted another root in the memory of man: the replacement of chaos with order, of brutality with judgment, of violence with law. Here, too, is a gift unfelt, because we are born within the charmed circle of its protection, and never know its value till we wander into the disordered or solitary regions of the earth. God knows that our congresses and our parliaments are dubious inventions, the distilled mediocrity of the land; but despite them we manage to enjoy a security of life and property which we shall appreciate more warmly when civil war or revolution reduces us to primitive conditions. Compare the safety of travel today with the robber-infested highways of medieval Europe. Never before in history was there such order and liberty as exist in England today,—and may some day exist in America, when a way is found of opening municipal office to capable and honorable men. However, we must not excite ourselves too much about political corruption or democratic mismanagement; politics is not life, but only a graft upon life; under its vulgar melodrama the traditional order of society quietly persists, in the family, in the school, in the thousand devious influences that change our native lawlessness into some measure of cooperation and goodwill. Without consciousness of it, we partake in a luxurious patrimony of social order built up for us by a hundred generations of trial and error, accumulated knowledge, and transmitted wealth.

Sixth, *morality*. Here we touch the very heart of our problem —are men morally better than they were? So far as intelligence is an element in morals, we have improved: the average of intelligence is higher, and there has been a great increase in the number of what we may vaguely call developed minds. So far as character is concerned, we have probably retrogressed; subtlety of thought has grown at the expense of stability of soul; in the presence of our fathers we intellectuals feel uncomfortably that though we surpass them in the number of ideas that we have crowded into our heads, and though we have liberated ourselves from delightful superstitions which still bring them aid and comfort, we are inferior to them in uncomplaining courage, fidelity to our tasks and purposes, and simple strength of personality.

But if morality implies the virtues exalted in the code of Christ, we have made some halting progress despite our mines and slums, our democratic corruption, and our urban addiction to lechery. We are a slightly gentler species than we were: capable of greater kindness, and of generosity even to alien or recently hostile peoples whom we have never seen. In one year (1928) the contributions of our country to private charity and philanthropy exceeded two billions of dollars—one half of all the money circulating in America. We still kill murderers if, as occasionally happens, we catch them and convict them; but we are a little uneasy about this ancient retributive justice of a life for a life, and the number of crimes for which we mete out the ultimate punishment has rapidly decreased. Two hundred years ago, in Merrie England, men might be hanged by law for stealing a shilling; and people are still severely punished if they do not steal a great deal. One hundred and forty years ago miners were hereditary serfs in Scotland, criminals were legally and publicly tortured to death in France, debtors were imprisoned for life in England, and respectable people raided the African coast for slaves. Fifty years ago our jails were dens of filth and horror, colleges for the graduation of minor criminals into major criminals; now our prisons are vacation resorts for tired murderers. We still exploit the lower strata of our working classes, but we soothe our consciences with "welfare work." Eugenics struggles to balance with artificial selection the interference of human kindliness and benevolence with that merciless elimination of the weak and the infirm which was once the mainspring of natural selection.

We think there is more violence in the world than before, but in truth there are only more newspapers; vast and powerful organizations scour the planet for crimes and scandals that will console their readers for stenography and monogamy; and all the villainy and politics of five continents are gathered upon one page for the encouragement of our breakfasts. We conclude that half the world is killing the other half, and that a large proportion of the remainder are committing suicide. But in the streets, in our homes, in public assemblies, in a thousand vehicles of transportation, we are astonished to find no murderers and no suicides, but rather a blunt democratic courtesy, and an unpretentious chivalry a hundred times more real than when men mouthed chivalric phrases, enslaved their women, and ensured the fidelity of their wives with irons while they fought for Christ in the Holy Land.

Our prevailing mode of marriage, chaotic and deliquescent as it is, represents a pleasant refinement on marriage by capture or purchase, and *le droit de seigneur*. There is less brutality between men and women, between parents and children, between teachers and pupils, than in any recorded generation of the past. The emancipation of woman, and her ascendancy over man, indicate an unprecedented gentility in the once murderous male. Love, which was unknown to primitive men, or was only a hunger of the flesh, has flowered into a magnificent garden of song and sentiment, in which the passion of a man for a maid, though vigorously rooted in physical need, rises like incense into the realm of living poetry. And youth, whose sins so disturb its tired elders, atones for its little vices with such intellectual eagerness and moral courage as may be invaluable when education resolves at last to come out into the open and cleanse our public life.

Seventh, *tools.* In the face of the romantics, the machine-wreckers of the intelligentsia, the pleaders for a return to the primitive (dirt, chores, snakes, cobwebs, bugs), we sing the song of the tools, the engines, the machines, that have enslaved and are liberating man. We need not be ashamed of our prosperity: it is good that comforts and opportunities once confined to barons and earls have been made by enterprise the prerogatives of all; it was necessary to spread leisure—even though at first misused—before a wide culture could come. These multiplying inventions are the new organs with which we control our environment; we do not need to grow them on our bodies, as animals must; we make them and use them, and lay them aside till we need them again. We grow gigantic arms that build in a month the pyramids that once consumed a million men; we make for ourselves great eyes that search out the invisible stars of the sky, and little eyes that peer into the invisible cells of life; we speak, if we wish, with quiet voices that reach across continents and seas; we move over the land and the air with the freedom of timeless gods. Granted that mere speed is worthless: it is as a symbol of human courage and persistent will that the airplane has its highest meaning for us; long chained, like Prometheus, to the earth, we have freed ourselves at last, and now we may look the eagle in the face.

No, these tools will not conquer us. Our present defeat by the machinery around us is a transient thing, a halt in our visible progress to a slaveless world. The menial labor that degraded both master and man is lifted from human shoulders and harnessed to the tireless muscles of iron and steel; soon every waterfall and every wind will pour its beneficent energy into factories and homes, and man will be freed for the tasks of the mind. It is not revolution but invention that will liberate the slave.

Eighth, *science.* In a large degree Buckle was right: we progress only in knowledge, and these other gifts are rooted in the slow enlightenment of the mind. Here in the untitled nobility of research, and the silent battles of the laboratory, is a story fit to balance the chicanery of politics and the futile barbarism of war.

Here man is at his best, and through darkness and persecution mounts steadily towards the light. Behold him standing on a little planet, measuring, weighing, analyzing constellations that he cannot see; predicting the vicissitudes of earth and sun and moon; and witnessing the birth and death of worlds. Or here is a seemingly unpractical mathematician tracking new formulas through laborious labyrinths, clearing the way for an endless chain of inventions that will multiply the power of his race. Here is a bridge: a hundred thousand tons of iron suspended from four ropes of steel flung bravely from shore to shore, and bearing the passage of countless men; this is poetry as eloquent as Shakespeare ever wrote. Or consider this city-like building that mounts boldly into the sky, guarded against every strain by the courage of our calculations, and shining like diamond-studded granite in the night. Here in physics are new dimensions, new elements, new atoms, and new powers. Here in the rocks is the autobiography of life. Here in the laboratories biology prepares to transform the organic world as physics transformed matter. Everywhere you come upon them studying, these unpretentious, unrewarded men; you hardly understand where their devotion finds its source and nourishment; they will die before the trees they plant will bear fruit for mankind. But they go on.

Yes, it is true that this victory of man over matter has not yet been matched with any kindred victory of man over himself. The argument for progress falters here again. Psychology has hardly begun to comprehend, much less to control, human conduct and desire; it is mingled with mysticism and metaphysics, with psychoanalysis, behaviorism, glandular mythology, and other diseases of adolescence. Careful and modified statements are made only by psychologists of whom no one ever hears; in our country the democratic passion for extreme statements turns every science into a fad. But psychology will outlive these ills and storms; it will be matured, like older sciences, by the responsibilities which it undertakes. If another Bacon should come to map out its territory, clarify the proper methods and objectives of its attack, and point out the "fruits and powers" to be won,—which of us, knowing the surprises of history and the pertinacity of men, would dare set limits to the achievements that may come from our growing knowledge of the mind? Already in our day man is turning round from his remade environment, and beginning to remake himself.

Ninth, *education*. More and more completely we pass on to the next generation the gathered experience of the past. It is almost a contemporary innovation, this tremendous expenditure of wealth and labor in the equipment of schools and the provision of instruction for all; perhaps it is the most significant feature of our time. Once colleges were luxuries, designed for the male half of the leisure class; today universities are so numerous that he who runs may become a Ph.D. We have not excelled the selected geniuses of antiquity, but we have raised the level and average of human knowledge far beyond any age in history. Think now not of Plato and Aristotle, but of the stupid, bigoted and brutal Athenian Assembly, of the unfranchised mob and its Orphic rites, of the secluded and enslaved women who could acquire education only by becoming courtesans.

None but a child would complain that the world has not yet been totally remade by these spreading schools, these teeming bisexual universities; in the perspective of history the great experiment of education is just begun. It has not had time to prove itself; it cannot in a generation undo the ignorance and superstition of ten thousand years; indeed, there is no telling but the high birth rate of ignorance, and the determination of dogma by plebiscite, may triumph over education in the end; this step in progress is not one of which we may yet say that it is a permanent achievement of mankind. But already beneficent results appear. Why is it that tolerance and freedom of the mind flourish more easily in the northern states than in the South, if not because the South has not yet won wealth enough to build sufficient schools? Who knows how much of our preference for mediocrity in office, and narrowness in leadership, is the result of a generation recruited from regions too oppressed with economic need and political exploitation to spare time for the ploughing and sowing of the mind? What will the full fruitage of education be when every one of us is schooled till twenty, and finds equal access to the intellectual treasures of the race? Consider again the instinct of parental love, the profound impulse of every normal parent to raise his children beyond him- is the biological leverage of human progress, a force trusted than any legislation or any moral exhortation, rooted in the very nature of man. Adolescence length- in more helplessly, and we grow more completely towards that higher man who struggles to be born out of our darkened souls. We are the raw material of civilization.

We dislike education, because it was not presented to us in our youth for what it is. Consider it not as the painful accumulation of facts and dates, but as an ennobling intimacy with great men. Consider it not as the preparation of the individual to "make a living," but as the development of every potential capacity in him for the comprehension, control, and *appreciation* of his world. Above all, consider it, in its fullest definition, as the technique of transmitting as completely as possible, to as many as possible, that technological, intellectual, moral, and artistic heritage through which the race forms the growing individual and makes him human. Education is the reason why we behave like human beings. We are hardly born human; we are born ridiculous and malodorous animals! we *become* human, we have humanity thrust upon us through the hundred channels whereby the past pours down into the present that mental and cultural inheritance whose preservation, accumulation and transmission place mankind today, with all its defectives and illiterates, on a higher plane than any generation has ever reached before.

Tenth and last, *writing and print*. Again our imagination is too weak-winged to lift us to a full perspective; we cannot vision or recall the long ages of ignorance, impotence and fear that preceded the coming of letters. Through those unrecorded centuries men could transmit their hard-won lore only by word of mouth from parent to child; if one generation forgot or misunderstood, the weary ladder of knowledge had to be climbed anew. Writing gave a new permanence to the achievements of the mind; it preserved for thousands of years, and through a millennium of poverty and superstition, the wisdom found by philosophy and the beauty carved out in drama and poetry. It bound the generations together with a common heritage; it created that Country of the Mind in which, because of writing, genius need not die.

And now, as writing united the generations, print, despite the thousand prostitutions of it, can bind the civilizations. It is not necessary any more that civilization should disappear before our planet passes away. It will change its habitat; doubtless the land in every nation will refuse at last to yield its fruit to improvident tillage and careless tenancy; inevitably new regions will lure with virgin soil the lustier strains of every race. But a civilization is not a material thing, inseparably bound, like an ancient serf, to a given spot of the earth; it is an accumulation of technical knowledge and cultural creation; if these can be passed on to the new seat of economic power the civilization does not die, it merely makes for itself another home. Nothing but beauty and wisdom deserve immortality. To a philosopher it is not indispensable that his native city should endure forever; he will be content if its achievements are handed down, to form some part of the possessions of mankind.

We need not fret then, about the future. We are weary with too much war, and in our lassitude of mind we listen readily to a Spengler announcing the downfall of the Western world. But this learned arrangement of the birth and death of civilizations in even cycles is a trifle too precise; we may be sure that the future will play wild pranks with this mathematical despair. There have been wars before, and wars far worse than our "Great" one. Man and civilization survived them; within fifteen years after Waterloo . . . defeated France was producing so many geniuses that every attic in Paris was occupied. Never was our heritage of civilization and culture so secure, and never was it half so rich. We may do our little share to augment it and transmit it, confident that time will wear away chiefly the dross of it, and that what is finally fair and worthy in it will be preserved, to illuminate many generations.

Discussion

1. Can Durant's ten italicized points be boiled down to three or four points?
2. Comment on: "Here in the untitled nobility of research, and the silent battles of the laboratory . . . is man at his best." Are there other activities in which man is equally admirable, or perhaps even more admirable?
3. Comment on Durant's use of specific detail such as the following: "she domesticated man as she domesticated the sheep and the pig"; "our prisons are vacation resorts for tired murderers"; "ensured the fidelity of their wives with irons, while they fought for Christ in the Holy Land." Is this casual humor or a technique of criticism? Explain.
4. Compare Durant's conception of education with Newman's (pp. 90–99) and Housman's (pp. 85–90).

E. B. WHITE · *The Crack of Doom*

The world, says Wells,[1] is at the end of its tether. "The end of everything we call life is close at hand," he writes in his last literary statement, distributed by International News Service. We note, however, that Mr. Wells went to the trouble of taking out a world copyright on his world's-end article. A prophet who was firmly convinced that the jig was up wouldn't feel any need of protecting his rights. We charge Mr. Wells with trying to play doom both ways.

Wells has been a good prophet, as prophets go, and his crystal-gazing is not to be sniffed at. And even lesser prophets, these days, can feel the "frightful queerness" that he says has come into life. At the risk, however, of seeming to suggest the continuance of life on earth, we must admit that we found the Wells article unconvincing in places. It is not clear yet, at any rate, whether the world is at the end of its tether or whether Wells is merely at the end of his. His description is not so much of the end of life in the world as of the end of his ability to figure life out. The two are not necessarily identical.

Wells is seventy-nine, and it is possible, of course, that he confuses his own terminal sensations with universal twilight, and that his doom is merely a case of mistaken identity. Most writers find the world and themselves practically interchangeable, and in a sense the world dies every time a writer dies, because, if he is any good, he has been wet nurse to humanity during his entire existence and has held earth close around him, like the little obstetrical toad that goes about with a cluster of eggs attached to his legs. We hope Mr. Wells is wrong for once and that man is not the suicide he looks at the moment. Man is unpredictable, despite Mr. Wells' good record. On Monday, man may be hysterical with doom, and on Tuesday you will find him opening the Doomsday Bar & Grill and settling down for another thousand years of terrifying queerness.

—From *The Wild Flag,* by E. B. White, Houghton Mifflin Company, publishers. Copyright by E. B. White, 1945.

[1] H. G. Wells (1866–1946), the famous English novelist, writer on scientific subjects, and social critic. [Editors' note.]

LEWIS · *The Law of Right and Wrong*

Every one has heard people quarrelling. Sometimes it sounds funny and sometimes it sounds merely unpleasant; but however it sounds, I believe we can learn something very important from listening to the kind of things they say. They say things like this: "That's my seat, I was there first"—"Leave him alone, he isn't doing you any harm"—"Why should you shove in first?"—"Give me a bit of your orange, I gave you a bit of mine"—"How'd you like it if anyone did the same to you?" —"Come on, you promised." People say things like that every day, educated people as well as uneducated, and children as well as grown-ups.

Now what interests me about all these remarks is that the man who makes them isn't just saying that the other man's behaviour doesn't happen to please him. He is appealing to some kind of standard of behaviour which he expects the other man to know about. And the other man very seldom replies, "To hell with your standard." Nearly always he tries to make out that what he has been doing doesn't really go against the standard, or that if it does, there is some special excuse. He pretends there is some special reason in this particular case why the person who took the seat first should not keep it, or that things were quite different when he was given the bit of orange, or that something has turned up which lets him off keeping his promise. It looks, in fact, very much as if both parties had in mind some kind of Law or Rule of fair play or decent behaviour or morality or whatever you like to call it, about which they really agreed. And they have. If they hadn't, they might, of course, fight like animals, but they couldn't *quarrel* in the human sense of the word. Quarrelling means trying to show that the other man's in the wrong. And there'd be no sense in trying to do that unless you and he had some sort of agreement as to what Right and Wrong are; just as there'd be no sense in saying that a footballer

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—From C. S. Lewis, *The Case for Christianity*, New York, 1943 (published in London under the title *Broadcast Talks*). Used with the permission of The Macmillan Company, New York, and Geoffrey Bles, Ltd., London.

had committed a foul unless there was some agreement about the rules of football.

Now this Law or Rule about Right and Wrong used to be called the Law of Nature. Nowadays, when we talk of the "laws of nature" we usually mean things like gravitation, or heredity, or the laws of chemistry. But when the older thinkers called the Law of Right and Wrong the Law of Nature, they really meant the Law of *Human* Nature. The idea was that, just as falling stones are governed by the law of gravitation and chemicals by chemical laws, so the creature called man also had *his* law—with this great difference, that the stone couldn't choose whether it obeyed the law of gravitation or not, but a man could choose either to obey the Law of Human Nature or to disobey it. They called it Law of Nature because they thought that every one knew it by nature and didn't need to be taught it. They didn't mean, of course, that you mightn't find an odd individual here and there who didn't know it, just as you find a few people who are colour-blind or have no ear for a tune. But taking the race as a whole, they thought that the human idea of Decent Behaviour was obvious to every one. And I believe they were right. If they weren't, then all the things we say about this war are nonsense. What is the sense in saying the enemy are in the wrong unless Right is a real thing which the Germans at bottom know as well as we do and ought to practise? If they had no notion of what we mean by right, then, though we might still have to fight them, we could no more blame them for that than for the colour of their hair.

I know that some people say the idea of a Law of Nature or decent behaviour known to all men is unsound, because different civilisations and different ages have had quite different moralities. But they haven't. They have only had *slightly* different moralities. Just think what a *quite* different morality would mean. Think of a country where people were *admired* for running away in battle, or where a man felt *proud* for double-crossing all the people who had been kindest to him. You might just as well try to imagine a country where two and two made five. Men have differed as regards what people you ought to be unselfish to—whether it was only your own family, or your fellow countrymen, or every one. But they have always agreed that you oughtn't to put yourself first. Selfishness has never been admired. Men have differed as to whether you should have one wife or four. But they have always agreed that you mustn't simply have any woman you liked.

But the most remarkable thing is this. Whenever you find a man who says he doesn't believe in a real Right and Wrong, you will find the same man going back on this a moment later. He may break his promise to you, but if you try breaking one to him he'll be complaining "It's not fair" before you can say Jack Robinson. A nation may say treaties don't matter; but then, next minute, they spoil their case by saying that the particular treaty they want to break was an unfair one. But if treaties don't matter, and if there's no such things as Right and Wrong—in other words, if there is no Law of Nature—what is the difference between a fair treaty and an unfair one? Haven't they given away the fact that, whatever they say, they really know the Law of Nature just like anyone else?

It seems, then, we are forced to believe in a real Right and Wrong. People may be sometimes mistaken about them, just as people sometimes get their sums wrong; but they are not a matter of mere taste and opinion any more than the multiplication table. Now if we're agreed about that, I go on to my next point, which is this. None of us are really keeping the Law of Nature. If there are any exceptions among you, I apologise to them. They'd better switch on to another station, for nothing I'm going to say concerns them. And now, turning to the ordinary human beings who are left:

I hope you won't misunderstand what I'm going to say. I'm not preaching, and Heaven knows I'm not pretending that I'm better than anyone else. I'm only trying to call attention to a fact; the fact that this year, or this month, or, more likely, this very day, we have failed to practise ourselves the kind of behaviour we expect from other people. There may be all sorts of excuses for us. That time you were so unfair to the children was when you were very tired. That slightly shady business about the money—the one you've almost forgotten—came when you were very hard up. And what you promised to do for old So-and-so and have never done—well, you never would have promised if you'd known how frightfully busy you were going to be. And as for your behaviour to your wife (or husband), if I knew how irritating they could be, I wouldn't wonder at it—and who the dickens am I, anyway? I am just the same. That is to say, I don't succeed in keeping the Law of Nature very well, and the moment anyone tells me I'm not keeping it, there starts up in my mind a string of excuses as long as your arm. The question at the moment is not whether they are good excuses. The point is that they are one more proof of how deeply, whether we like it or not, we believe in the Law of Nature. If we didn't believe in decent behaviour, why should we be so anxious to make excuses for not having behaved decently? The truth is, we believe in decency so much—we feel the Rule or Law pressing on us so—that we can't bear to face the fact that we're breaking it, and consequently we try to shift the responsibility. For you notice that it's only for our bad behaviour that we find all these explanations. We put our *bad* temper down to being tired or worried or hungry; we put our good temper down to ourselves.

Well, those are the two points I wanted to make tonight. First, that human beings, all over the earth, have this curious idea that they *ought* to behave in a certain way, and can't really get rid of it. Secondly, that they don't in fact behave in that way. They know the Law of Nature; they break it. These two facts are the foundation of all clear thinking about ourselves and the universe we live in.

RALPH DE TOLEDANO · *The Cult of the Conductor*

The bare essentials of conducting, according to Charles O'Connell, can be learned in half an hour by anyone able to read a score. Though this overstates the case, it is nevertheless true that year after year the music schools turn out young men who can lead an orchestra through a reading of the standard symphonic repertory with considerable competence. There are, furthermore, a small number of highly skilled conductors who rot in the hinterland while the public clusters about the three or four "great names," elevated by God and their press agents to positions of unapproachable eminence.

—From *The American Mercury,* June, 1949. Reprinted by permission of *The American Mercury* and Ralph de Toledano.

The result is that to many who would have difficulty in distinguishing Monteverdi from Moussorgsky, Toscanini, Stokowski and Koussevitzky are now magical quantities. Carnegie Hall audiences do not swoon, but they do flock to their heroes with genuine worship. It is enough to say that Toscanini is broadcasting or that Stokie is conducting: all questions of program are forgotten, as if the music were distinctly secondary.

Romantic legends about the interpretive genius of the man with the baton are what bring in the crowds, sell the phonograph records, pile up good Hooper ratings. If the conductor's personality is sufficiently powerful, if he can develop a colorful trademark, if he has that elusive quality of dynamic showmanship, then he is made. Any violence he may do to the written score, any infidelity to the intent of the composer, are as easily overlooked as lack of good taste in a beautiful woman. "Mood" becomes the criterion, and this is too often achieved by whipping up the musicians, distorting tempi, introducing gratuitous sonorities. From faults, these are converted into virtues—the signs of a "creative" soul.

Needless to say, it is not essential for a conductor to be wedded to the last hemidemisemiquaver in every score. Notation is at best a kind of musical shorthand which can be transformed into sound only because a tradition exists, guiding instrumentalist and conductor in performance. But though we cannot expect microtonic definition or metronomic exactitude, we can protest when the performer disregards text and tradition in favor of a purely subjective and "temperamental" negation of a composer's will. This was recognized by Verdi, back in 1871, when, angered by such "tyranny," he refused to let conductors interpret "creatively."

Some time ago, Toscanini broadcast the *Magic Flute* overture. The radio audience which heard him, judging by its applause and by the comment of critics, greeted the performance thunderously—as did many sensitive musicians. Yet the complex of sounds that issued from the NBC Symphony that afternoon bore a greater relation to the *Heigh-Ho Silver* theme in *William Tell* than it did to Mozart. In the headlong rush of Toscanini's "interpretation," all semblance to the original rhythmic relationships was lost, along with the lyric quality of the music.

Discussing the Maestro's cavalier treatment of both score and traditional groundwork, Virgil Thomson has written that "what seems to be more important is [Toscanini's] unvarying ability to put over a piece. Like Mendelssohn, he quite shamelessly whips up the tempo and sacrifices clarity and ignores a basic rhythm, just making his music, like his baton, go round and round if he finds his audience's attention tending to waver. No piece has to mean anything specific; every piece has to evoke from its hearers a spontaneous vote of acceptance."

Thomson calls this the "wow technique," a term of singular aptness. The projection of Toscanini's temperament, his ability to impose what has come to be called by musicians the "Toscanini beat" on every reading, and the unquestionable sincerity of his approach all induce a mass hypnosis and a suspension of the critical faculty in the public as well as in the musicians themselves.

II

Or consider the case of Stokowski. To the general public, Stokowski represents *the* conductor, perhaps even more than Toscanini. And musicians, always more concerned with technique than with content, have paid many tributes to his handling of an orchestra and to the incredible tonal quality he can extract from his men —although few have bothered to note that under the "colorless" Eugene Ormandy, the Philadelphia orchestra has not diminished in brilliance and has, in fact, gained musically.

Stokowski's skill as a manipulator of orchestral sonorities, his interest in acoustics and balance in a radio age, are all to his credit. To those who are overcome by his soaring brasses and the ripeness of his orchestrations, the question of fidelity to musical content may seem stuffy. But it is precisely here that violent exception can be taken. Defenders of Stokowski's transcriptions, for example, claim that in taking the music of Bach and subjecting it to the requirements of a modern orchestral palate, Stokowski has given the multitude a means of working its way into the great storehouse of baroque music. The fallacy here lies in the belief that pure Bach is just a little too much for the great unwashed. Many forget that the wandering hands of Stokowski have also meddled with Schubert, as when he added parts to the *B Minor* symphony. Or that when Stokowski moves over into the music of Wagner (who certainly wrote for modern orchestra), the same bombast creeps in. To uncritical Stokowski devotees, the impeccable and shimmering performance by Furtwangler of the *Good Friday Spell* (recorded ten years ago for RCA-Victor) or even Toscanini's current readings, seem rather dull.

Berlioz called the arrangement of masterworks "the most enormous of crimes, an assault on genius." But it would be a misconstruction to think that he meant by that a flat edict in favor of musical embalming. When Stiedry puts orchestral flesh on Bach's skeletal *Art of the Fugue,* this is an "arrangement" in a literal sense. But it is one which grows out of deep study to determine as nearly as possible how Bach himself would have given body to this exhaustive fugal exercise. When Beethoven's *Grosse Fuge* is set for chamber orchestra in an attempt to clarify a work which to many is chaotic and well-nigh incomprehensible, it is an "arrangement" merely in dimension.

The *Passacaglia in C Minor* and the *Toccata and Fugue in D Minor* as transcribed by Stokowski are definitely an assault on the whole internal logic of the original compositions. Rhythmic progressions, dynamic relationships, and the interplay of timbres are of equal consequence in the musical *gestalt,* and figure vastly in the re-creation of what Paul Nettl called the "psychic attitude" of the composer. In Stokowski's lushly romantic phrasing and climactic definition, it is his own psychic attitudes we are hearing, not Bach's.

III

Stokowski is not the only one who has given Johann Sebastian Bach a Russian accent. The Koussevitzky juggernaut, with its rolling cadences, its bland attack, and its elided phrasing, has rolled over the *Brandenberg Concertos* (and other works of Bach), driving from many ears the clean-contoured, four-square, Germanic reading by Otto Klemperer and the New Friends of Music of not too many years back. But Klemperer, unfortunately, has been reduced in the public memory to the lowest level of his tragic eccentricities, while Koussevitzky's reputation has been blown up sky high. Consider these true words of Klemperer, written back in 1942:

> The fact that expression marks and dynamics are rarely found in the actual manuscripts of Bach seems to challenge the interpreter to fill the vacuum. . . . If I were now asked how one should interpret Bach, my answer would be: as simply as pos-

> sible. The unadorned interpretation is best. . . . The more we are aware of the spontaneity and directness of Bach's music, the less we must do to it in order to make it live again for others. . . .

More precisely, the conductor must filter his personality and technique through the composer's, and not vice versa. This is exactly what Toscanini claims to do, what at his best he succeeds in doing. In the achievement of this identification, the pattern of the music is spaciously laid bare, and the significant inner voices of the score, which more "personal" conductors obscure, brought into aural focus. It is at these great moments that any conductor ceases to be a prima donna and becomes instead the agent of the composer's genius.

Concert-goers have permitted the conductor to forget that he is not a pianist improvising solo on his instrument. And the conductor, in turn, has forgotten that his first function is an executive one; he must lead the musicians under him, train them to respond to his direction, instill in them that *esprit de corps* which makes of a group of instrumentalists an orchestra, make them sensitive to his will. But his approach to the music must be fundamentally different—as a student. To translate a score into sound, into color and pulse, he must have for it all the respect of a builder for an architect's blueprint.

IV

It is a relatively modern practice for the conductor to set himself above the composer, to insist in placing his own trademark on another's music. This error probably began with Mendelssohn who believed that all music should be played just a little faster than written, "to give it spirit." But if we go back to the beginnings of orchestral music, the picture is different. The function of the conductor then was to keep proper tempo, to insure precision and clarity, to impose cohesion, and to maintain orchestral balance. Vitality and accuracy were the criteria of good performance, not personal idiosyncrasy. From the start, emphasis was on training in the exact and scrupulous analysis of the musical score—something sadly lacking among our star-rated conductors.

Jean Baptiste Lully, the father of conducting, led his orchestra not with æsthetically waving hands but with a heavy stick which he pounded to ensure instrumental and rhythmic discipline. It was this sort of discipline which distinguished the famous Mannheim orchestra and made it the most advanced in Europe, giving it the precision which permitted it to pioneer in the art of orchestral dynamics.

In the romantic era, with the mushrooming of orchestral size—in the early days of Western orchestration Monteverdi had been daring with 38 men, but Mahler dreamed of 1000—the function of the conductor as technician should have been, by all logic, further stressed. The man on the podium now had to cope with mammoth string sections, brass choirs, and a variety of instrumentation which would have completely bewildered the pioneers. Today's conductor must also cope with pyramidal scoring, continual key changes, sudden shifts in tempo, cross rhythms, and abrupt dynamics—all of an infinite complexity. But the romantic era, unfortunately, nurtured as well a desire for bombast, for soulful effect—and for the heroic conductors who could feed this desire. Radio and the movies have carried this tendency to an extreme.

As a result, the stars rule the airwaves and the key concert halls while truly remarkable conductors are lost in the shuffle. The great symphony orchestras like the Boston and the Philadelphia become the personal instruments of large musical egos, the New York Philharmonic is battered to a pulp by a succession of temperaments, and the public clamors for more. But an impeccable and sensitive orchestral musician like Pierre Monteux—admired by Brahms and Debussy, under whose direction *Le Sacre du Printemps* and *Daphnis and Chloe* were first performed—is banished to San Francisco after a long series of slights, beginning with his rejection by the Boston when Karl Muck left, and ending with the small notice he received for organizing and training Toscanini's NBC Symphony.

Wagner maintained that a conductor's first rule of interpretation must be "to convey the composer's intention with scrupulous fidelity . . . without introducing modifications of his own." This advice is still pertinent today.

Discussion

What standard of judgment is applied to the craft of the conductor?

DOROTHY BREWSTER AND ANGUS BURRELL •

The Old Wives' Tale

There is nothing more obvious than the fact that all old people were once young. Here is the simplest aspect of the part played by time in our lives. But every now and then a commonplace like this strikes upon a sensitive imagination like a revelation and induces a profound emotion out of which grows a work of art. This happened to Arnold Bennett one evening in 1903, when he was dining in a restaurant in Paris, and an old woman, laden with parcels, came in, looking so fat, clumsy, and grotesque that everyone laughed.

> I reflected [Bennett wrote], that this woman was once young, slim, perhaps beautiful—certainly free from these ridiculous mannerisms. Her case is a tragedy. One ought to be able to make a heart-rending novel out of the case of such a woman as she. Every stout aging woman is not grotesque—far from it; but there is an extreme pathos in the mere fact that every stout aging woman was once a young girl with the unique charm of youth in her form and movements and in her mind. And the fact that the change from the young girl to the stout aging woman is made up of an infinite number of infinitesimal changes, each unperceived by her, only adds to the pathos. It was at that instant that I was visited by the idea of writing the book which ultimately became *The Old Wives' Tale.*

De Maupassant's *Une Vie* had recorded the life of a woman from girlhood to old age, with the average experiences of young love, marriage, motherhood, sorrow, loss, and disillusionment; this novel Bennett admired so much that he determined to create its English counterpart, but with characteristic assurance, he wished to go de Maupassant one better, and to write, not of one woman, but of two.

He placed his two heroines, Constance and Sophia Baines, in the midst of the Victorian era and in the heart of the provincial

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— Reprinted from Dorothy Brewster and Angus Burrell, *Modern Fiction.*
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district in England which he knew most intimately. He had grown up in one of the Five Towns in Staffordshire, where is made all the everyday crockery used in the United Kingdom; and had passed his own childhood in the house in St. Luke's Square where the Baines family lived, next to their draper's establishment. The county is in the center of England, the Five Towns in the center of county, and St. Luke's Square in the center of the oldest of the Five Towns. It is all as English, all as average as possible—a life "unsung by searchers after the extreme." Bennett had withdrawn from it soon enough—he was twenty-one when he went to London—to be enabled to view it in perspective. With a strong sense of its humorous aspects and its limitations, yet deeply in sympathy with it, he gives a convincing representation of its intimate daily life and a moving interpretation of its people. There are the men and women who stay on Main Street; here are Mid-Victorian parlors, Nottingham lace curtains, kitchens, sulky servants, afternoon teas, children's parties, pampered fox terriers, local fairs and local scandals, marketing and churchgoing—the whole world of the commonplace and the everyday.

Sophia and Constance, delightful girls at the outset of the tale, grow up in this little world of the Five Towns, fundamentally alike in the sterling traits of character belonging to the Baines stock, but different enough to seek different stages on which to play their parts. Constance, the more pliable and conventional, marries the head clerk of her father's shop, remains in the house in St. Luke's Square, and retraces almost every design in her mother's life, as housekeeper, wife, and mother. Sophia, more rebellious and spirited, elopes to Paris with the attractive, irresponsible Gerald Scales, lives through some ecstasies and many bitter disillusionments, cuts herself off completely for thirty years from the Five Towns, adapts herself to Paris life after her worthless husband disappears, and becomes the successful manager of a most exemplary pension. First we follow the story of Constance through the years up to the point where her grown son leaves her to study art in London. Then we go back and pick up the thread of Sophia's life, follow it through the same span of years until an illness and the accidental renewal of contact with the Five Towns lead her to rejoin her sister in St. Luke's Square. The currents of their lives then flow in one stream to the end.

Sophia's life had more spectacular possibilities. One might have expected her to develop traits very different from those of her homekeeping sister. But throughout all her French experience, there persist in Sophia the characteristic Five Towns virtues and limitations. Sophia is as impermeable to Paris as Strether in *The Ambassadors* is vulnerable. She learns to speak its language, to play the game of making a living according to its rules, and to manage its people in the service of her ends. On the common ground of thrift, she and its tradesmen can meet in understanding and sympathy. But the beauty of Paris, its art, its atmosphere, its sense of the value of the passing moment, the many graces of its living, all these have no voice for her spirit. She is captivated during the brief days of her happiness with Gerald by the gaiety and glitter of the café life. But she is soon aware of the hollowness of that. And later she sees the underside of the lives of the prostitutes on Montmartre, and condemns such living—not so much for its immorality as for its laxity and its untidiness and its ultimate failure. Not "'What a sinner!'" but "'What a fool!'" she thinks of the woman who had nursed her in her illness; "'If I couldn't have made a better courtesan than this miserable woman, I should have drowned myself.'" It is the Five Towns instinct for good workmanship cropping up.

Once only does Paris almost win out over the Five Towns. This is during Sophia's little holiday dinner with Chirac, the journalist, who in many of her most difficult experiences had come to her assistance with delicate consideration. The atmosphere of the tiny restaurant is agreeable, reassuring, friendly; Chirac's love-making is not unexpected. Curiosity not merely about him but about herself had tempted Sophia tacitly to encourage him. She is close to that experimental attitude toward life that had amazed her some years before in Chirac—when he had gone to see a guillotining as a psychological experience, "'to observe himself in such circumstances.'" "'How strange even nice Frenchmen are,'" she had thought. Now she herself is almost on the edge of experimentation. But from some obscure instinct she repulses him. Bennett, with that rather hard, unshaded certainty of his, which is in such great contrast to Conrad's tentativeness in the face of the psychological problem, explains her refusal as the result of a certain haughty moral independence, leading her to despise any open expression of emotion—a Baines trait, a Five Towns trait. Chirac suffers too openly. If ever there was a chance for Sophia to flower into graciousness and become sensitive to other than Five Towns values in life, it was at this moment. The danger was that she would close her doors against enriching experience and grow harder, narrower, more barren. And she does. She becomes the landlady—efficient, stylish, diplomatic, armed against every trickery, who could not be startled and could not be swindled. After thirty years in Paris, all that she brings back to St. Luke's Square—aside from a skill in dressing that no one in the Five Towns possessed—is the French poodle, Fossette.

After the funeral of Constance, who outlives her sister, no one is left in the house but the cook and the infirm French poodle, Fossette—"sole relic of the connection between the Baines family and Paris." The tearful servant prepares the dog's dinner and places it before her in the customary soup-plate in the customary corner. Fossette sniffs at it and then walks away and lies down with a sigh in front of the kitchen fire. She has been deranged in her habits that day and is conscious of neglect owing to events that passed her comprehension.

> However after a few minutes she began to reconsider the matter. She glanced at the soup-plate, and, on the chance that it might after all contain something worth inspection, she awkwardly balanced herself on her old legs, and went to it again.

So the curtain falls on *The Old Wives' Tale*. It contains many episodes that, if isolated on their little stage, would furnish the material of a dramatic novel.

There is the murder committed by a relative of the Baines family, a tragedy that might well be the climax of a dramatic novel. But it is important in the story simply because Constance's husband, Samuel, embraced his unfortunate cousin's cause, wore himself out in the effort to save him from the gallows, lost the fight, and died of exhaustion and disappointment. The story flows on past this tragedy. More significant still in creating the final effect of *The Old Wives' Tale* is the handling of the siege of Paris in 1870. Sophia is in Paris during the siege, struggling to draw together the broken threads of her life after her illness and her desertion by Gerald. With the business sense that is her Five Towns inheritance, she has managed to secure lodgers, provide them with food, and find a modest profit in it. "For Sophia the conclusion of the siege meant chiefly that prices went down. . . . The signing of the treaty reduced the value of Sophia's two remaining hams from about five pounds apiece to the usual price of hams." Bennett had acquired this sense of what the siege meant to ordinary people by questioning an old French servant about his experiences at the time: "You went through the Siege of Paris, didn't you?" he asked. The old man turned uncertainly to his wife: "The Siege of Paris? Yes, we did, didn't we?" The siege was only one incident among many in their lives and time had reduced it to a faint memory.

"An infinite number of infinitesimal changes" marks the change from young girl to aging woman, and these Bennett traces without any effect of monotony. Both sisters grow steadily slower and less flexible in activities, emotions, sympathies, hopes, interests. Constance, realizing suddenly that Samuel, her husband, was nearly forty and that she had been married six years, reflected that nothing had happened. She had obtained a sure ascendency over her mother—not by seeking it, but just by the passing of time; she had acquired skill in the management of her household and her shop; she had constructed a chart of Samuel's individuality with the submerged rocks and perilous currents all carefully marked so that she could voyage safely in those seas; and Fan, the puppy, whose entrance into a hitherto dogless home had been one of the revolutionary changes wrought by her marriage, was now a sedate and disillusioned dog, with a son in the house and grandchildren scattered over the town.

It is by giving us vividly the quality of certain moments of realization in the lives of the sisters that Bennett most effectively conveys the sense of the passing of the years. These are the moments when life seems to pause and to reveal something of its meaning to them, so that they think they understand what they have been living through and how they have changed since the last moment when they were fully conscious of themselves. Such a moment comes to Sophia, when, as a young girl full of ambition and energy, she stands beside the bed of her paralytic father and listens to his prohibitions and his commands—this wreck, she suddenly realizes—dictating to her youth! And she is saddened into profound grief by the absurdity of the scene. In a momentary ecstasy of insight, she feels older than her father in her understanding of life. Pure pride of youth and joy of living possess Sophia driving with Gerald down the Champs Élysées; with intense, throbbing emotion, she longs with painful ardor for more and more pleasure then and forever. Compare this simple ecstasy with the curiously complicated and subtle emotion, colored by reflection and disappointment, of the Sophia of the restaurant scene with Chirac. And then watch Sophia at fifty, looking out once again on the Square of her girlhood, remembering its aspect on winter mornings, remembering her own youth, finding it all beautiful and touching; and suddenly reflecting that not for millions of pounds would she live her life over again. Then the tragic moment, ten years later, when she is shocked into a kind of primitive emotion, uncolored by any moral or religious quality, by the sight of the dead old man who had been Gerald. It made no difference that Gerald had wasted his life or caused her sorrow. What affected her was that he had once been young and that he had grown old and was now dead. Youth and vigor always come to that—everything came to that. " 'Yet a little while and I shall be lying on a bed like that. And what shall I have lived for? What is the meaning of it?' " Constance, who in her more placid way had embraced more completely such experiences as came to her within the narrow limits of St. Luke's Square, ends not with the tragic question, but with a half-ironic affirmation. Old and alone and sick as she was—just a rheumatic old lady in the eyes of the rising generation—when she surveyed her life and life in general, she would think with a sort of tart but not sour cheerfulness, " 'Well, that is what life is.' "

Although Fossette is alone on the stage when the scene closes, there is no feeling of emptiness, for we have been kept aware of Constance's son and his friends, and Samuel Povey's nephew, and others of the generation that has been gradually coming to look on the two sisters as mere pathetic survivals from an earlier time. Life in the Five Towns moves on.

Discussion

1. What is the central idea of *The Old Wives' Tale?*
2. What is the purpose of the third paragraph of the selection?
3. Are we given an account of what happens in the novel? In what paragraphs?

4. Are any of the paragraphs devoted exclusively to synopsis? Point out any passages of appraisal or criticism that may occur in passages revealing the content of the novel.
5. Do the authors of the essay admire the novel? Do they feel that it successfully dramatizes its main idea? Refer to specific passages in giving your answer.
6. Is this essay on *The Old Wives' Tale* intended for people who have not read the book? Justify your answer.
7. What standards of excellence in the novel are implied in this essay?
8. Judging from this essay, does the novel fit Pearl Buck's definition of literature ("Literature and Life," pp. 472–480)? Explain.

Writing

Write a criticism of a novel in which you clearly indicate the author's main idea or purpose and show in detail how this idea or purpose is stressed throughout the novel. Show how well you think the author achieves his purpose and whether the purpose is really important or significant.

CARL VAN DOREN · *Huckleberry Finn*

Virtues still larger than structural unity make *Huckleberry Finn* Mark Twain's masterpiece.[1] In richness of life *Tom Sawyer* cannot compare with it. The earlier of the two books keeps close home in one sleepy, dusty village, illuminated chiefly, at inconvenient moments, by Tom Sawyer's escapades. But in *Huckleberry Finn* the plot, like Mark Twain's imagination, goes voyaging. Five short chapters and Huck leaves his native village for the ampler world of the picaresque. An interval of captivity with his father—that unpleasant admonitory picture of what Huck may some day

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— From Carl Van Doren, *The American Novel, 1789–1939*. Copyright 1940 by The Macmillan Company and used with their permission.

[1] The author has just praised *Tom Sawyer for its structural unity.* [Editors' note.]

become if he outgrows his engaging youthful fineness—and then the boy slips out upon the river which is the home of his spirit. There he realizes every dream he has ever had. He has a raft of his own. He has a friend, the Negro Jim, with the strength of a man, the companionableness of a boy, and the fidelity of a dog. He can have food for the fun of taking it out of the water or stealing it from along shore. He sleeps and wakes when he pleases. The weather of the lower Mississippi in summer bites no one. At the same time, this life is not too safe. Jim may be caught and taken from his benefactor. With all his craft, Huck is actually, as a boy, very much at the mercy of the rough men who infest the river. Adventure complicates and enhances his freedom. And what adventure! It never ceases, but flows on as naturally as the river which furthers the plot of the story by carrying the characters from point to point. Both banks are as crowded with excitement, if not with danger, as the surrounding forest of the older romances. Huck can slip ashore at any moment and try his luck with the universe in which he moves without belonging to it. Now he is the terrified and involuntary witness of a cruel murder plot, and again of an actual murder. Now he strays, with his boy's astonished simplicity, into the Grangerford-Shepherdson vendetta and sees another Romeo and Juliet enacted in Kentucky.[2] In the undesired company of the king and the duke, certainly two as sorry and as immortal rogues as fiction ever exhibited, Huck is initiated into degrees of scalawaggery which he could not have experienced, at his age, alone: into amateur theatricals as extraordinary as the Royal Nonesuch and frauds as barefaced as the impostures practised upon the camp-meeting and upon the heirs of Peter Wilks. After sights and undertakings so Odyssean, the last quarter of the book, given over to Tom Sawyer's romantic expedients for getting Jim, who is actually free already, out of a prison from which he could have been released in ten minutes, is preserved from the descent into anticlimax only by its hilarious comic force. As if to make up for the absence of more sizable adventures, this mimic conspiracy is presented with enough art and enough reality in its genre studies to furnish an entire novel. That, in a way, is the effect of *Huckleberry Finn* as a whole: though the hero, by reason of his youth, cannot entirely take part in the action, and the action is therefore not entirely at first hand, the picture lacks little that could make it more vivid or veracious.

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[2] The locale is Arkansas, not Kentucky. [Editors' note.]

Huckleberry Finn, was, with *The Scarlet Letter,* and *Moby Dick,* the third American novel that can be called, simply, great. Of the three only *Moby Dick* offers picture and problem both; *The Scarlet Letter* has in contrast virtually no picture; *Huckleberry Finn,* virtually no problem. Huck undergoes, it is true, certain naggings from the set of unripe prejudices he calls his conscience; and once he rises to an appealing unselfishness when, in defiance of all the principles he has been taught to value, he makes up his mind that he will help the runaway slave to freedom. But in the sense that *The Scarlet Letter* and *Moby Dick* pose moral and cosmic problems, *Huckleberry Finn* poses none at all. Its criticism of life is of another sort. Mark Twain, in the midst of many vicissitudes remembering the river of his youthful happiness, had seen the panorama of it unrolling before him and had been moved to record it out of sheer joy in its old wildness and beauty, assured that merely to have such a story to tell was reason enough for telling it. Having written *Life on the Mississippi* he had already reduced the river to its own language; having written *Tom Sawyer,* he had got his characters in hand. There wanted only the moment when his imagination should take fire at recollection and rush away on its unspeculative task of reproducing the great days of the valley. Had Mark Twain undertaken to make another and a greater *Gilded Age* out of his matter, to portray the life of the river satirically on the largest scale, instead of in such dimensions as fit Huck's boyish limitations of knowledge, he might possibly have made a better book, but he would have had to be another man. Being the man he was, he touched his peak of imaginative creation not by taking thought how he could be a complete novelist of the Mississippi but by yarning with all his gusto about an adventure he might have had in the dawn of his days. Although he did not deliberately gather riches, riches came.

Discussion

1. Does Mr. Van Doren write for readers who know nothing whatever about *The Adventures of Huckleberry Finn?* Explain your answer.

2. What is the value of this criticism for the great number of people who are more or less familiar with *Huckleberry Finn?*
3. Give a detailed explanation of the last sentence of the selection.
4. What standards of excellence in the novel are declared or implied in Van Doren's criticism? Does *Huckleberry Finn* measure up to these standards?
5. Compare this criticism of a novel with that of *The Old Wives' Tale* on pp. 457–463.

Writing

Write a review of a novel which you have often heard praised or dispraised, but which you are now reading for the first time. Indicate the extent to which you agree with the opinions you have heard.

MARK VAN DOREN · *A Life of Audubon*

The story of Audubon has been told many times; and rightly so, since Americans in the century to come are likely to be as curious about it as they are about the stories of Washington and Lincoln, of Paul Revere and Daniel Boone. It is already one of the indispensable American myths, being first of all a success story on the grand scale and in addition being a symbol of our national Golden Age. Every author who touches John James Audubon shines with a certain light reflected forward from the time, now a little more than a century ago, when the continent basked in the white man's sunrise and a long-haired French youth came there with nothing but hope and glory in his eyes. The special virtue of Miss Rourke is that as a historian she has studied the sources of that light and knows how to stand where its rays will fall full upon her as she tells the story again. The title of her twelfth chapter is In the

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— From *The Private Reader* by Mark Van Doren. Reprinted by permission of Henry Holt and Company, Inc. Copyright, 1942, by Mark Van Doren. This review of Constance Rourke's *Audubon* was first printed in *The Nation,* October 31, 1936.

Golden Age, and the next to the last sentence of her book says of the light in Audubon's paintings that it is "always clear and cool, as though the world were seen in the early morning." She has written as much about the age as about the man.

This will account for the obvious fact that her narrative is less dramatic than it can legitimately be. She has not felt her hero with the intensity, for instance, which distinguished the biography of Audubon by Donald Culross Peattie. Whereas Mr. Peattie made a great deal of drama out of the famous meeting in Louisville between Audubon and his future rival, Alexander Wilson, Miss Rourke contents herself with noting in two pages that the episode occurred; and against Mr. Peattie's exciting account of Lucy's arrival in New Orleans to be once more with the husband for whom she had made so many sacrifices there stand in Miss Rourke's book eight noncommittal words: "The family was reunited, and this was happiness." For that matter she has toned down the sacrifices; to the extent at least of itemizing from a bill of sale in 1819 the handsome household goods with which the Audubons lived in Henderson, Kentucky, until their failure there. She can not be said to ignore any important incident in the biography, nor does she tell her story without skill. It is simply that her deepest interest is in the background: in the lingo which Audubon heard along the rivers and learned to use, in the folklore with which as a hunter he was invariably plied, in the songs and dances among whose rhythms he moved, in the tall tales and the practical jokes which he liked as well as anyone. She gives more space to the great earthquake of 1811 which sank islands in the Mississippi and created lakes in western Tennessee. She makes the most of every possible encounter with Daniel Boone, because Boone too is background that cannot be slighted. And her portraits of places—New Orleans, Feliciana, Fatland Ford—are painted for their own sakes by one to whom every recoverable portion of early-nineteenth-century America is precious and must be preserved.

Her final triumph, however, is with the fauna of the time. The biographer of David Crockett, the historian of American humor, and the untiring student of our remotest folkways makes herself for the present purpose and for the time being a naturalist, a familiar on their own ground with the birds and quadrupeds of which Audubon's America was so full. It is as if she had decided that no living thing in such a world must be alien to her; and remembered that life for her hero was chiefly a matter of wings, a thunder of feet. Cataracts of birds pour through her pages, and the forest is alive with an army of animals; nor has she forgotten the jungle of flowers from which the painter selected sprays to perch his subjects upon. She has lavished upon the task, too, an exact learning; she does not let it go with a few patches of impressionism. She is always specific, always documented, and always interesting; as when, for example, she watches over Audubon's shoulder a snowy owl along the Ohio shore near Louisville:

> Deep cavities or potholes lay among the shoals where fish found the shelter of calm water. Near these the owl was watching. Lying flat on a rock in midstream like a stealthy cat watching for a mouse, his body lengthwise, his head down but turned toward the water, he looked like a soft patch of snow and seemed asleep, but if a fish rose to the surface from the pothole, out went his barbed claw; he carried it away, devoured it, and came back. When one pothole failed to yield fish he slid over to another. He was joined without a rustle of sound by his mate in the pale early darkness. With the first streak of light they were lost like small white clouds in General Clark's woods.[1]

Or as when she looks up with him at "some goshawks trailing a great crowd of swiftly flying pigeons over the Ohio":

> Suddenly one of them turned aside to a flock of blackbirds, and the blackbirds swiftly closed together and were like a dusky ball passing through the air. The goshawk claimed four or five of them with ease, squeezed them, dropped them into the river. As the blackbirds reached dense woods they plunged, and the goshawk wheeled and dipped and picked up his prey from the surface of the water.

She has Audubon's own notes to guide her in many a passage of this sort. But it is plain that she has equipped herself to understand the notes, and as far as possible to see what Audubon saw. He saw "the primal natural world as part of our inheritance." She desires that we see it too; and has her desire.

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[1] This passage and the one immediately following from Constance Rourke's *Audubon,* copyright 1936, are quoted with the permission of the publishers, Harcourt, Brace Company, Inc.

Discussion

1. What is said to be the particular excellence of Constance Rourke's biography of Audubon?
2. What defects or limitations in the biography are noted by the reviewer?
3. Why is the biography compared to other biographies of Audubon?
4. Why, according to the reviewer, is Audubon important to America?

Writing

As a book review assignment, compare two biographies or long biographical essays about the same person.

JOHN MASON BROWN · *Wilder: "Our Town'*

Coming back to "Our Town," even in book form, after the altering years of war and so-called peace, is an experience at once poignant and reassuring. Most nations, most things, most of us who saw Thornton Wilder's play eleven years ago have changed immeasurably. It, however, remains unchanged. It has not gone out of style, as plays do with frightening rapidity. It does not seem old-fashioned. It has not lost is rightness. It tugs with its original directness at emotions which are beyond change.

Most people remember that in "Our Town" Mr. Wilder dispensed with scenery and depended upon his own words, a few properties, a stage manager, and the imagination of his audience for the setting of his stage. He did not work as a realist—at least in the ordinary sense or manner. He did not bother to contrive a story. Everybody's life was his plot. His acts divided themselves into the growing-up, the marrying, and the dying in one New England township. The swift race of the years was his villain, and man's blindness in running this race his sure appeal to our compassion.

—From *The Saturday Review of Literature,* Twenty-fifth Anniversary Issue, August 6, 1949. Reprinted by permission of *The Saturday Review of Literature* and John Mason Brown.

Mr. Wilder was concerned with all those average things which are the common lot but which seem exceptional to each of us when we experience them. If he did away with scenery and relied on a stage manager to set his stage, it was because the human heart was his real scene. It was the heart of a community which he laid bare. This community, supposedly observed between 1901 and 1913, was as New England as the white spire of a Congregational church. Yet quaint in custom and removed in time though it was, it managed to include us all. What is more, it continues to do precisely this even when encountered in print and in an altered world.

Its first two acts are as effective as they ever were. In them the simple stuffs of youth, of parenthood, of school days and growing-up, of courtship and hoping, are caught with radiant imperishability. They manage to be general in their application even when stated in terms of individuals. Somehow they link the fires in New England homes with hearths everywhere, from today right back to Greece and Babylon. Although these acts are brightened by a dry, humorous, Yankee matter-of-factness, in their mood, perception, and tenderness they are poetic.

It is only in the concluding act that "Our Town" is disappointing. Here again I found the play unchanged because, for me at least, this last act, which has death and the dead as its subject, has always been a disappointment. Its chill is inescapable; its words are too colloquial; its ideas too small. The familiar aspects of living, dealt with so imaginatively in the first two acts, dwindle here into guesses unsupported by high imagination. There are many touching moments as when, for example, the young wife who had died in childbirth is allowed to return to her living parents for one unimportant day in her childhood. But there is a let-down. The surety of the two fine preceding acts is diminished, their universality lost.

In the Thirties, tingling as they were with social consciousness, there were those who complained because Grover's Corners was not more like Middletown. They could not believe in "Our Town" because it lacked brothels, race riots, front-page scandals, social workers, agitators, and strikes. The passing years, however, have only proved Mr. Wilder's correctness in writing as he did. His subject had no date lines. His interest was not what gets into the public prints. It was what each of us must live with in private. Man's spirit was his business; man's spirit and evocations of those small-important incidents which test us in our daily living.

Adding to the timelessness of the first two acts of "Our Town" is the non-representational form in which Mr. Wilder elected to have his say. It is make-believe of the frankest sort. It is as old as the theatre, and as new as the last time it was used effectively. Although it is not the kind of form that every playwright could use for every play, it is the right form for Mr. Wilder to have used for "Our Town." It sets him free. It leaves his imagination unimprisoned within settings. It relieves him of the need of employing the ordinary and quickly aging techniques of realistic plays. Indeed, it is as timeless as his own subject matter.

Not many plays have come out of the American theatre which better with the years. "Our Town" is one of these. Much as I admired it in 1938, I find that now I admire it even more.

Discussion

1. Does the author review *Our Town* as a book or as a stage performance?
2. What virtues and what defects does the reviewer find in the play? Did he find the same virtues and defects when he first became acquainted with the play? Has the lapse of ten years made the play seem less significant or more significant to the reviewer?
3. Is there likely to be greater value in a literary criticism based on a rereading some years later than in one based on a first reading when the work criticized is new?

Writing

Write a critical essay on a book you have reread after some years, or on one which you read after seeing a movie version. Compare your first and second impressions.

PEARL S. BUCK · *Literature and Life*

The contribution of literature to life is so large a subject that to say anything definite about it is like trying to hold two large separate stars in the universe and show their cosmic relationship. What is this cosmic relationship? What, if anything, can literature contribute to the individual to enable him to know how to live in his environment?

The answer to this question depends of course on our definition of literature. Is literature what most people read, or what a few people have written? Are popular magazine stories literature? Are detective stories, romances, Wild West tales, true heart confessions, to be included in literature, and is that what we have to think of when we consider how literature contributes to life? Or are we to limit our definition of literature to a few books written by a few dead?

This we do know—most people in America know the mechanics of reading. We are not, of course, the most literate nation on earth. There are several nations where the literacy ratio is a good deal higher than ours, notably Japan. But somewhere along the way, even though formal education does not persist beyond the grades, we have been exposed, though very slightly, to what is considered great literature. We know, too, that most of us do not read very much after all—or if we read, it is in relatively small numbers. There is, of course, the much-talked-of competition with reading—radio, motion pictures, and automobiles, all combine to keep people away from books and literature. A sort of life seems to be coming, in which books could be largely eliminated and their loss scarcely noticed. Indeed, it is already here for many people.

All this is true. And yet it does not, I think, matter so much that the mass of the people are never going to read literature. The bits of Shakespeare and Browning and Tennyson—or whatever children have in school now-a-days—are not going to affect them

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From *The Saturday Review of Literature*, August 13, 1938. Reprinted by permission of *The Saturday Review of Literature* and Pearl S. Buck. Copyright, 1938, by Pearl S. Buck.

one way or the other. No, we have to acknowledge that literature is never going to contribute to most lives at all. Most people are going to the movies, instead, not to a particular picture, but just to the movies. They will turn on the radio, not to a special program, but just turn it on. They will read newspaper headlines probably, and make a desultory choice out of the lurid array of popular magazines on the stand at the street corner or in the drugstore. If a book is talked about a great deal, as a few books a year always are in the United States, they may look into it curiously just to see what it is everybody is talking about. That is all.

I will confess this surprised me at first, since having lived so much of my life in a country where ninety per cent of the population was illiterate, I had come to value literacy and to think people would read if they knew how. I see now, after four years of watching my fellow countrymen, that knowing how to read has little to do with reading. People learn to read in order to read advertisements, bills, sport announcements, and news—although printed news does not matter so much since we are getting so many pictorial magazines. Of course in the old days of silent pictures to know how to read was necessary, because of the captions, but now we have talking pictures—and we will have talking newspapers, they tell us, before long—and the radio gives us love and crime and wisecracks.

But not all of us belong to that radio-tuning, movie-going, unthinking crowd. What concerns me is that the intelligent people —the leading people, the people who have brains and whatever we possess of culture and very often of means—they do not read; or if they do, they read too often digests of books and essays and stories rather than the works themselves.

Yet the habitual readers of digests inevitably lose the appreciation of style and grace in language, just as we would lose appreciation of food, its taste and color and texture, if we should take it in the form of chemical pellets. Our physical nourishment might be adequate, but mere physical nourishment from food is not enough. To get the plain meat out of a book or story or essay is to live on dull fare, so insidiously dull that we do not know what we are missing. So it is not enough to get the bare meaning out of a piece of music or of a painting or of a great book. "Mona Lisa" digested is nothing but a woman smiling. A digested symphony is nothing but a group of themes which can be played in five minutes. *Of Human Bondage* is a book without a plot, one which no magazine would accept as a serial, and which could be digested in a few pages of a small magazine.

When these digests are made of literature, people read them and think they know what it is all about. Yet they do not know what it is about. For they have missed that which makes literature. The blue pencil reduces everything to the dead tastelessness of a chemically prepared pellet. That graceful fleeting fancy, that individual quality which is the inherent mark of genius upon every material which it chooses to work upon, is lost. People say they are so busy. *I* say, if you have only half an hour, use it not for a hurried survey of the bones of books and magazines, picked for you by someone you do not know, who may have overlooked entirely the one incident, character, or quality which would have most enriched your reading, but use that valuable half-hour for reading entire, and as it was really written, one thing—a few real pages from a book, or one actual story or essay. You will have more in the end—more real food for thought, and your literary palate will not be dulled by a succession of small dishes prepared by the same cook in the same pot and all tasting alike.

There is, of course, no harm in ~~amusement and diversion~~. That is a legitimate reason for literature. What concerns me is that educated people are amused and diverted by the ephemeral passing book or story or the smart, silly patter of a columnist, and not by literature. I am not surprised or concerned when Mrs. Jones, the janitor's wife, begs the librarian for a nice book with a lot of things happening but everything turning out all right. But I am concerned when Mrs. So-and-So in Sutton Place, a graduate of the finest schools of our country and wife of one of our leading men, uses her scant leisure, after all the worthy enterprises in which she engages, from Spanish relief to a rally of Republican women, to read—what she does read. That lady once undertook to upbraid an author for writing in a certain popular magazine. Said she, "I picked up a copy of *Purple Shadows* the other day and was astonished to find a story of yours in it. How can you write for such magazines?"

Said the author, "How can you read such a magazine?"

Said she, "My dear, I only do it for relaxation."

Whereupon I began to ponder why, when she wants relaxation, she reads what even she considers trash. Why does the cheap, the ephemeral, the highly colored, the falsely romantic, relax and amuse the educated mind instead of boring it? Education, to be sure, has left this mark—it has taught people a sense of shame, so that they know they should have on their tables the great names and books of literature. But these are not what they really read. The threat to literature, the check upon its development, is not from the low standards of the many ignorant, but from the low standards of the few intelligent, who more often demand of literature that it shall not be true art rather than that it shall.

There are reasons, of course, for this state of being. Foremost, perhaps, is our often boasted youth.

Culture, of course, is after all a matter of time and long, mellowing age. And collectively we are not old and individually we cling to childhood and its enjoyments. We do not want to grow up. And the reason for this is that the average person in America is not yet interested in life. That is, he is not interested in human nature and its true character. Or perhaps it would be truer to say he is interested in the activities of life, but not in its meaning or its philosophy. He is instinctively frightened of anything like a view of himself and why and how he is. And yet that view, of course, is what literature is.

What do we want when we read? We approach literature with a strange, impossible sort of expectation. We ask, on the one hand, to be supplied with unrealistic romantic ideals so earnest as to be naive, which have, it seems to me, no reality of any kind, either actual or desirable, and on the other hand, we have this childish wish to be amused, or rather to escape from the very restrictions to which we cling. We ask to be uplifted and—or—amused—if possible, a little of both at the same time. Yet literature, it seems to me, has nothing essentially to do with either of these things, except incidentally. Literature cannot have as its function the satisfaction of moralism nor the wish to escape from it if it must deal simply with life as it is.

I read modern American novels rather assiduously, as a matter of interest, and I find further evidence of what I have been trying to say in the lack of interest in life. The characters are almost universally subordinated to the incident and environment;

That is, what apparently interests readers is how much characters hop, skip, and jump, and not how they feel and are. Characters are instantly recognizable types—good, bad, funny, pretty, are about all the adjectives needed to describe them. Especially in the so-called regional novels is there evident this poverty of character analysis and development—novels very properly so-called, too, for they are novels of regions—the weather of the regions, the storms, the crops, the animals, the shootings and crimes, and so forth, but never, deeply, the people. There seems in our American literature especially to be no real relationship developed between the region and its people. Yet it seems to me only when that relationship is thoroughly understood and portrayed can the result be even called regional literature.

I have recently come back from a journey through seventeen central states of our country, and as part of my preparation for this trip I read some of the regional novels. I was able to get a good idea of the landscape, of the weather, and of the history of various regions, and, in particular, amazingly good local color, but absolutely nowhere an adequate idea of the people. In all the books the people were the least interesting part because the most slightly developed and the least understood. Yet, even in a journey, it was the people who impressed me. The landscape, for instance, of South Dakota, is in some ways the finest I have ever seen in the world—the most amazing, and the most strange, and the most beautiful. It is on such a scale and so peculiar, as well, that I cannot blame a writer for dwelling upon its shapes, its weather, and its devastations. But to me far more vivid than that terrific landscape were the people who live there—it seems to me they are the most magnificent people I ever saw, dreamers, all of them, those who are left, people held to the country in spite of abject poverty, people who live in the dream of a tomorrow, believing still in the country they cannot but love. They are not really subordinated by the landscape. They tower above it, poor as death and as triumphant. What literature lies there, unwritten—and probably never to be written, because young love is not of primary importance and there is very little action! Outwardly people seem static—they suffer and wait and dream, but what tremendous inner action there is in those three words! Not many people see the romance in a man's loving dry black soil that will not yield him food and holding to it grimly because if there were water it would yield enormously, and tomorrow it may rain. Yet there is the essence of romance in it. But the ending may not be happy.

We are afraid, we Americans, of tragedy. I mean tragedy in the deep fundamental sense of the Greeks, who understood that life is tragic in its whole course from its unexplained beginnings to its unknown end. Even comedy in that Greek sense had its foundations in tragedy—a butterfly fluttering in gaiety over a dark and bottomless river. So long as we shrink in fear from acknowledging we are what we are, beings brought into this brief consciousness which we call life, and from accepting this to proceed to the living and understanding of this life, we can have no great literature.

And yet I feel nothing is stronger in our American people than the desire to find some sort of philosophy with which to face life. The desire is inarticulate, and it expresses itself in all sorts of ways, from swing music to theosophy. There is such an earnest blind longing to know what to make of life as it is, and it is coupled at the same time with a sort of fear of knowing, so that when anything serious comes near, it is evaded by the jazz touch. And so even literature is evaded, as something too serious, though if they would only see, they would know that literature contributes to the understanding they want of what life is, and can help them to know, therefore, what their attitude toward life should be, as reasonable creatures.

It would be easy for me to do what many have done—simply shrug my shoulders at the mass of popular writing and say that it has nothing to do with literature. But I cannot. I keep going back to it—it is what most people read—then it must have its importance somewhere in relation to literature. One cannot dismiss lightly a magazine bought and read by three million people or a book bought and read even by thousands. It is important. It is a serious thing for literature if three million read—not literature, but something else which gives them greater satisfaction. I have put the blame on the people. But there is always the possibility that there is something wrong with literature. Jazz, so despised once, we have now come to think of as contributing something very especial to music. What it is we do not know, and shall not know until jazz is dead, and its vitality has become merged into the great body of permanent music. Swing—is it fad or new rhythm? Who knows or can know in our generation? It must run its course until we see it take its true place in what is past. If it has a definite value for human beings something will remain which no amount of scorn or ignoring can kill or even displace.

Perhaps it is literature which today has become devoid of philosophy—so devoid that it has no inner light, so that people, reading, have caught no real illumination of the life which most of us live so blindly from day to day. The vogue for historical novels has been, perhaps, because the novels of present-day life cast no glow. Perhaps people are not afraid of tragedy, after all, if it is *their* tragedy—that is, tragedy which they recognize as beyond mere sordid living. The greatest books have always been tragedies. *Madame Bovary* is one of the most tragic books ever written. So is *Resurrection.* So is *Of Human Bondage.* So is *Vanity Fair.* The list is long, and most of these books when they first appeared were met with criticism. People did not immediately like them. It took time to get over the first revulsion against sadness and see beyond into the light. But the books that people have kept on reading are the books with that inner light which makes them have a sort of timeless rightness and accord with life which is happiness in itself, as distinguished from amusement and a mere happy ending. These are the books which give life in the full—not slantwise from the viewpoint of region or vogue. These are the books which have laid hold upon life and have had a philosophy to expound. A lesson is a glib thing—easy to teach, easy to learn and gabble off. But a philosophy is something wrought out of experience. It can be accepted or rejected but never learned by rote.

I do not need to say, I am sure, that by the word "philosophy" I mean no dry abstractions without relation to human daily lives. I mean those questions which every creature capable even of simple thought asks himself in times when he is alone—hours which he may hate and dread and from which he seeks all sorts of escapes, but which, nevertheless, exist—those hours when he asks, who am I and why was I born and what is it all for? Who are these others and what have they to do with me and what have I to do with them? To ask these questions is to seek the essentials of some sort of philosophy of life. And to answer them in one way or another, is the meaning of literature. Whenever a book, through the direct voice of poetry or through the voices of characters in a novel, recognizes these fundamental questions of the human heart, that book is read and lives on and on. And whenever a book ignores them, though it achieves a momentary popularity, it passes on and is forgotten. Light upon the deep and primitive inquiry of the human heart is the primary contribution, then, of literature to life.

It may seem a curious contradiction to say on one hand that people demand nothing but amusement from literature and then to say that literature which only amuses does not satisfy them. But such indeed is the case. The American public is peculiarly constituted and full of contradictions. With all our child-like love of a good time, we never really have a good time unless we feel we are improving ourselves, too. The moral sense is very strong in us. It may be it is only that well-known and famous puritan conscience, which it is said is never strong enough to keep us from doing anything we want to do, but only strong enough to keep us from enjoying whatever we do do. We may be trying, in all our desire for escape, to escape not from the realities of life, but from the reality of ourselves. If so, of course escape is impossible, and yet, if it is impossible, the effort is all the more frantic. But none can escape that Hound of Heaven—his own self. And real literature has nothing to do with that attempt to escape. It has only to do with the pursuit, and it shows that the end of that pursuit is but the deeper and fuller understanding of that self.

So long as we breathe we are in this world which encloses us. Literature does offer the only real escape—but deeper into the world and not away from it. And that is what it contributes to life—more life, more understanding of that life. Any good book is like a microcosm where in a small compass we can see how life functions. In our daily experiences we are lost in the largeness of all around us. We cannot understand all that is going on. But a good book catches a part of what is going on and holds it for us, and we can see relationships there, and causes and effects which escape us in the flying by of actual time and events.

We ought when we put down a book to feel a.deeper sense of completion of self, not of escape from it. We ,ought to understand that self better and feel in closer accord with it and more content with it. If we do, then the book is literature, and literature has made its contribution to life.

Discussion

1. In the second paragraph Pearl Buck asks what literature is. Why does she not provide an answer until the final paragraphs of the essay?
2. What major point does she make before she gives her definition of literature?
3. What, stated in your own words, is her definition of literature? Is the definition more negative than positive? Why is it so? Name some books, besides those mentioned, that would fit her definition.
4. Is the author's view of the literary and artistic taste of the majority too low?
5. Are the analogies in paragraph 7 (beginning, "Yet the habitual readers . . .") fair ones?
6. After reading the essay carefully and thus knowing the contexts of *moralism* (paragraph 15, beginning, "What do we want . . .") and *regional novels* (paragraph 16, beginning, "I read modern . . ."), define these terms.

JOHN LIVINGSTON LOWES · *Imagination Creatrix*

Every great imaginative conception is a vortex into which everything under the sun may be swept. "All other men's worlds," wrote Coleridge once, "are the poet's chaos." In that regard "The Ancient Mariner" is one with the noble army of imaginative masterpieces of all time. Oral traditions—homely, fantastic, barbaric, disconnected—which had ebbed and flowed across the planet in its unlettered days, were gathered up into that marvel of constructive genius, the plot of the *Odyssey*, and out of "a tissue of old *märchen*" was fashioned a unity palpable as flesh and blood and universal as the sea itself. Well-nigh all the encyclopedic erudition of the Middle Ages was forged and welded, in the white heat of an indomitable will, into the steel-knit structure of the *Divine Comedy*. There are

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— From *The Road to Xanadu*, by John Livingston Lowes, 1930. Reprinted by permission of and arrangement with Houghton Mifflin Company, the authorized publishers.

not in the world, I suppose, more appalling masses of raw fact than would stare us in the face could we once, through some supersubtle chemistry, resolve that superb, organic unity into its primal elements. It so happens that for the last twenty-odd years I have been more or less occupied with Chaucer. I have tracked him, as I have trailed Coleridge, into almost every section of eight floors of a great library. It is a perpetual adventure among uncharted Ophirs and Golcondas to read after him—or Coleridge. And every conceivable sort of thing which Chaucer knew went into his alembic. It went in *x*—a waif of travel-lore from the mysterious Orient, a curious bit of primitive psychiatry, a racy morsel from Jerome against Jovinian, alchemy, astrology, medicine, geomancy, physiognomy, Heaven only knows what not, all vivid with the relish of the reading—it went in stark fact, "nude and crude," and it came out pure Chaucer. The results are as different from "The Ancient Mariner" as an English post-road from spectre-haunted seas. But the basic operations which produced them (and on this point I may venture to speak from first-hand knowledge) are essentially the same.

As for the years of "industrious and select reading, steady observation, insight into all seemly and generous arts and affairs" which were distilled into the magnificent romance of the thunder-scarred yet dauntless Rebel, voyaging through Chaos and old Night to shatter Cosmos, pendent from the battlements of living sapphire like a star—as for those serried hosts of facts caught up into the cosmic sweep of Milton's grandly poised design, it were bootless to attempt to sum up in a sentence here the opulence which countless tomes of learned comment have been unable to exhaust. And what (in apostolic phrase) shall I more say? For the time would fail me to tell of the *Æneid,* and the *Orlando Furioso,* and the *Faërie Queene,* and *Don Juan,* and even *Endymion,* let alone the cloud of other witnesses. The notion that the creative imagination, especially in its highest exercise, has little or nothing to do with facts is one of the *pseudodoxia epidemica*[1] which die hard.

For the imagination never operates in a vacuum. Its stuff is always fact of some order, somehow experienced; its product is that fact transmuted. I am not forgetting that facts may swamp imagination, and remain unassimilated and untransformed. And I know, too, that this sometimes happens even with the masters. For some of the greatest poets, partly by virtue of their very greatness, have had, like Faust, two natures struggling within them. They have possessed at once the instincts of the scholar and the instincts of the artist, and it is precisely with regard to facts that these instincts perilously clash. Even Dante and Milton and Goethe sometimes clog their powerful streams with the accumulations of the scholar who shared bed and board with the poet in their mortal frames. "The Professor still lurks in your anatomy"—*Dir steckt der Doktor noch im Leib*—says Mephistopheles to Faust. But when, as in "The Ancient Mariner," the stuff that Professors and Doctors are made on has been distilled into quintessential poetry, then the passing miracle of creation has been performed.

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[1] Widespread errors.

II

But "creation," like "creative," is one of those hypnotic words which are prone to cast a spell upon the understanding and dissolve our thinking into haze. And out of this nebulous state of the intellect springs a strange but widely prevalent idea. The shaping spirit of imagination sits aloof, like God as he is commonly conceived, creating in some thaumaturgic fashion out of nothing its visionary world. That and that only is deemed to be "originality"—that, and not the imperial moulding of old matter into imperishably new forms. The ways of creation are wrapt in mystery; we may only marvel, and bow the head.

Now it is true beyond possible gainsaying that the operations which we call creative leave us in the end confronting mystery. But that is the fated terminus of all our quests. And it is chiefly through a deep-rooted reluctance to retrace, so far as they are legible, the footsteps of the creative faculty that the power is often thought of as abnormal, or at best a splendid aberration. I know full well that this reluctance springs, with most of us, from the staunch conviction that to follow the evolution of a thing of beauty is to shatter its integrity and irretrievably to mar its charm. But there are those of us who cherish the invincible belief that the glory of poetry will gain, not lose, through a recognition of the fact that the imagination works its wonders through the exercise, in the main, of normal and intelligible powers. To establish that, without blinking the ultimate mystery of genius, is to bring the workings of the shaping spirit in the sphere of art within the circle of the great moulding forces through which, in science and affairs and poetry alike, there emerges from chaotic multiplicity a unified and ordered world.

For the operations which we have been tracing are, in essentials, the stuff of general experience. We live, every one of us—the mutest and most inglorious with the rest—at the centre of a world of images. And they behave with us, and you and I behave with them, in such fashion that were only the ineffable increment of genius present, "Ancient Mariners might hang on every bush." . . . The thronged yet sleeping subliminal chambers; the summons which unlocks their secret doors; the pouring up of images linked in new conjunctions provocative of unexpected *aperçus;* the conscious seizing and directing to an end of suggestions which the unconscious operations have supplied—not one stage of the process, nor even the transaction as a whole, is the monopoly of poetry. It is the stuff of which life weaves patterns on its loom; and poetry, which is life enhanced and glorified, employs it too in fashioning more rarely beautiful designs. Intensified and sublimated and controlled though they be, the ways of the creative faculty are the universal ways of that streaming yet consciously directed something which we know (or think we know) as life.

Creative genius, in plainer terms, works through processes which are common to our kind, but these processes are superlatively enhanced. The subliminal agencies are endowed with an extraordinary potency; the faculty which conceives and executes operates with sovereign power; and the two blend in untrammelled interplay. There is always in genius, I imagine, the element which Goethe, who knew whereof he spoke, was wont to designate as "the Dæmonic." But in genius of the highest order that sudden, incalculable, and puissant energy which pours up from the hidden depths is controlled by a will which serves a vision—the vision which sees in chaos the potentiality of Form.

III

. . . "The imagination," said Coleridge once, recalling a noble phrase from Jeremy Taylor's *Via Pacis,* ". . . *sees all things in one.*" It sees the Free Life—the endless flux of the unfathomed sea of facts and images—but it sees also the controlling Form. And when it acts on what it sees, through the long patience of the will the flux itself is transformed and fixed in the clarity of a realized design. For there enter into imaginative creation three factors which reciprocally interplay: the Well, and the Vision, and the Will. Without the Vision, the chaos of elements remains a chaos, and the Form sleeps forever in the vast chambers of unborn designs. Yet in *that* chaos only could creative Vision ever see *this* Form. Not without the cooperant Will, obedient to the Vision, may the pattern perceived in the huddle attain objective reality. Yet manifold though the ways of the creative faculty may be, the upshot is one: from the empire of chaos a new tract of cosmos has been retrieved; a nebula has been compacted—it may be!—into a star.

Yet no more than the lesser are these larger factors of the creative process—the storing of the Well, the Vision, and the concurrent operation of the Will—the monopoly of poetry. Through their conjunction the imagination in the field of science, for example, is slowly drawing the immense confusion of phenomena within the unfolding conception of an ordered universe. And its operations are essentially the same. For years, through intense and unremitting observation, Darwin had been accumulating masses of facts which pointed to a momentous conclusion. But they pointed through a maze of baffling inconsistencies. Then all at once the flash of vision came. "I can remember," he tells us in that precious fragment of an autobiography—"I can remember the very spot in the road, whilst in my carriage, when to my joy the solution occurred to me." And then, and only then, with the infinite toil of exposition, was slowly framed from the obdurate facts the great statement of the theory of evolution. The leap of the imagination, in a garden at Woolsthorpe on a day in 1665, from the fall of an apple to an architectonic conception cosmic in its scope and grandeur is one of the dramatic moments in the history of human thought. But in that pregnant moment there flashed together the profound and daring observations and conjectures of a long period of years; and upon the instant of illumination followed other years of rigorous and protracted labour, before the *Principia* appeared. Once more there was the long, slow storing of the Well; once more the flash of amazing vision through a fortuitous suggestion; once more the exacting task of translating the vision into actuality. And those are essentially the stages which Poincaré observed and graphically recorded in his

"Mathematical Discovery." And that chapter reads like an exposition of the creative processes through which "The Ancient Mariner" came to be. With the inevitable and obvious differences we are not here concerned. But it is of the utmost moment to more than poetry that instead of regarding the imagination as a bright but ineffectual faculty with which in some esoteric fashion poets and their kind are specially endowed, we recognize the essential oneness of its function and its ways with all the creative endeavours through which human brains, with dogged persistence, strive to discover and realize order in a chaotic world.

For the Road to Xanadu is the road of the human spirit, and the imagination voyaging through chaos and reducing it to clarity and order is the symbol of all the quests which lend glory to our dust. And the goal of the shaping spirit which hovers in the *poet's* brain is the clarity and order of pure beauty. Nothing is alien to its transforming touch. "Far or forgot to (it) is near; Shadow and sunlight are the same." Things fantastic as the dicing of spectres on skeleton-barks, and ugly as the slimy spawn of rotting seas, and strange as a star astray within the moon's bright tip, blend in its vision into patterns of new-created beauty, *herrlich, wie am ersten Tag.*[1] Yet the pieces that compose the pattern are not new. In the world of the shaping spirit, save for its patterns, there is nothing new that was not old. For the work of the creators is the mastery and transmutation and reordering into shapes of beauty of the given universe within us and without us. The shapes thus wrought are not that universe; they are "carved with figures strange and sweet, All made out of the carver's brain." Yet in that brain the elements and shattered fragments of the figures already lie, and what the carver-creator sees, implicit in the fragments, is the unique and lovely Form.

Discussion

1. After you are certain that you understand Lowes's main points, answer and discuss this question: Is Huxley, in "The Method of Scientific Investigation," pp. 242–249 concerned with imagination as Lowes defines the term?
2. Make a list of words which you found it necessary to look up in a dictionary. How many of these are key words—words which are essential to the expression of major ideas?

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[1] Glorious, as on the day of Creation. [Editors' note]

SECTION 5 · *Narrative, Sketch, Personal Essay*

A. J. LIEBLING · *Broadway Storekeeper*

The I. & Y. cigar store at Forty-ninth Street and Seventh Avenue is open twenty-four hours a day every day of the year except Yom Kippur. During daylight hours it performs the same function as any other cigar store on a fairly busy corner. People coming up from the B. M. T. station or going down into it often buy cigarettes at the I. & Y. The essential character of the place is not apparent until nightfall, when it becomes the neighborhood's nearest approach to a country store. After dark the I. & Y. expands into a forum of public opinion and an arena of practical jokes. Permanent chairman of the debates is the proprietor, Izzy Yereshevsky.

Izzy has to keep his store open all night because one of the main props of his business is selling cigarettes to nearly every night club in town. The hat-check concessionaires, whose stakes in the resorts also entitle them to sell cigarettes at twenty-five cents a pack, never seem able to estimate their needs in advance. Izzy gets emergency telephone calls at all hours for cartons of cigarettes; his nephew, Little Izzy, is on the go making deliveries from dark to dawn. In addition, Izzy supplies those long-legged dolls and beribboned Teddy bears which cigarette girls hawk between the tables in night clubs. Izzy stays open because of the night-club trade and he gets the night-club trade because he stays open.

This stuffed-animal sideline of Izzy's is likely to puzzle the casual visitor to his cigar store—a fairly deep but narrow shop, about twelve feet by thirty. In the show window on Seventh Avenue sit three Cubans making cigars by hand. Clustered around the Cuban's feet in the window, are ranks of Teddy bears and dolls, some pert, some droopy, and all well cured in the aroma of tobacco leaves.

Izzy Yereshevsky is a Jewish peasant. Because he is essentially a countryman, his store has acquired a communal, bucolic atmosphere. Izzy performs all sorts of community services that pay him nothing. "On Broadway," Izzy sometimes says, "you got to be werry good, werry sweet to everybody. And even then they stick you in the back." Remaining an outlander, he feels it necessary to placate the local gods.

—From *Back Where I Came From,* by A. J. Liebling; copyright 1938 by the author. Reprinted by permission of Citadel Press.

Most of his evening guests—their purchases are so infrequent that it would be misleading to call them customers—wear white felt hats and overcoats of a style known to them as English Drape. Short men peer up from between the wide-flung shoulders of these coats as if they had been lowered into the garments on a rope and were now trying to climb out. To Izzy his guests are the people of Broadway. They are the big talkers and, on the rare occasions when they have cash in their pockets, the big spenders. In truth the boys in the white felt hats and the English Drapes do not love money for its own sake. Each fosters a little personal legend of lost affluence; fifty grand dropped on the races in one day, twenty grand blown on a doll in a brief sojourn at Atlantic City. Never to have been in the chips marks one as a punk or a smalltimer. It precludes conversation in big figures. Continuous prosperity, to the boys, however, hints of avarice and is discreditable.

Until 1913 Izzy worked on a tobacco farm in the Ukraine, and when he first came to America he went from the boat to a place in Connecticut he calls East Windsor, Ill. His brother had a job on a tobacco farm there. Izzy worked with him for a year and saved eight hundred dollars. Then he came to New York to learn the trade of cigar-making. Eighteen years ago he opened the I. & Y. two blocks down Seventh Avenue from its present situation.

"I am the 'I.' and I am the 'Y.'," he explains. Two initials sounds more responsible."

Izzy is famous for the power of his handshake. He pulls his right hand back• level with his shoulder, holds it cocked for a moment, then crashes it against the hand of the person he is greeting. It is as if you have been hit on the palm with a night stick. "Hol-*lo doc*-tor," Mr. Yereshevsky invariably shouts as he strikes. "Doctor" is his conventional salutation. In Izzy's store, as on the East Indian Island of Buru and among certain Australian aborigines, it is considered bad form to speak a man's real name lest one unwittingly give an enemy power over his future. It is also bad form in addressing a customer who has been away to ask him where he has been. He may have been in Hollywood or he may have been in jail. If he has been in Hollywood he will say so.

Izzy is a man of slightly less than medium height, with broad shoulders and gray, crinkly hair. The color is somewhat deceptive, because Izzy was young enough to be drafted in the World War. A generous and often bluish jowl offsets the effect of Izzy's sensitive nose and mouth. He further masks his inner nature by clenching a large cigar of his own manufacture in the right corner of his jaw. The effort to sustain the cigar twists Izzy's mouth into a hard, jaunty smile hardly in keeping with his timid nature.

Izzy accepts more bad checks than anybody else on Broadway. To make his books balance in the face of such odds, he finds it necessary to work eighteen hours a day. He comes to the I. & Y. at noon and leaves at six o'clock the next morning. He likes to say he has been "thirty-six years on Broadway; eighteen years days, and eighteen years nights." After the midtown night clubs close, concessionaires and headwaiters foregather at the I. & Y. to discuss business conditions, and the cigarette girls drop in to buy their dolls and Teddy bears. Even then, Little Izzy, the delivery boy, is still darting out into the night with orders for late-closing places. On an ordinary night Izzy's nephew hustles up to Harlem or down to Greenwich Village at least a half a dozen times.

Izzy does not drink, gamble, or patronize night spots. He works very hard, and most of the men who spend their evenings in his store find this irresistibly amusing. When Izzy announces that another check has bounced, his friends have been known to go out and roll with mirth on the sidewalk in back of the Rivoli Theatre. To them the calamities of virtue are exquisitely comic. They revel in unmerited catastrophe and sometimes cite Izzy as an example of the uselessness of honest toil.

Izzy shows no resentment. He feels that Broadway people who write bad checks are actuated not by greed but a need for self-expression. They want money to lose on the horse races. Izzy thinks horses are parasitic organisms that live on his human acquaintances. He blanches at the sight of a policeman's mount.

"Win money on a horse race?" he echoes, when asked his opinion of the sport. "How did you think them horses get feeded?"

Every fortnight or so he heads a subscription to bury some horseplayer who has died broke. There are always impromptu collections under way at the I. & Y. for the relief of various indigent nocturnal characters, and the boys subscribe freely. They take an equal pride in giving charity and bilking their creditors.

Izzy has another nephew, Max, who is a graduate of James Monroe High School and a deep student of human nature. A slender, pale young man with a scraggly mustache, he assists Izzy behind the counter. "Everybody who comes in here wants money so he can be a sucker," Max says. "You have to be in the money before you can be a sucker. Only out-of-towners think being a sucker's a disgrace."

One of the favorite amusements among the boys is improvising tall tales to bewilder strangers. A regular habitué of the I. & Y. will shout to another, as if they had just met for the first time, "Say, ain't you the feller that I seen with an animal act at the Hippodrome fifteen years ago, where the camel dived into the tank with you on his back?"

"Sure," the other will come back, calmly, "but it wasn't a camel; it was an elephant I was on."

A friendly stranger, just stopping in to make a purchase, may remark incredulously at this point, "I didn't think the Hippodrome tank was big enough to hold an elephant." Then everybody laughs like mad.

Some of the members of Izzy's cénacle have lovely names. A large, emphatic fellow who usually talks about big real-estate deals, rocking on his heels and shouting, is called Hairynose because of a clump of red hair sprouting from his nostrils. Everybody knows that in workaday life he is a necktie salesman, but Izzy likes to hear him talk of big land deals. Then there are Skyhigh Charlie and Three-to-Two Charlie. Skyhigh is a ticket speculator with an office on Forty-seventh Street, a large, florid man who buys Izzy's three-for-fifty cigars. The fortunes of the theatrical season may always be gauged by a quick glance at the little finger of Skyhigh's left hand. He wears a ring with a cluster of bulbous diamonds on it, buying larger stones when he makes money, pawning them and wearing smaller ones when things are dull. Three-to-Two Charlie is a betting man with a predilection for short odds which his more reckless intimates find detestable. One elderly lounger with a long goatee and a mane of hair is invariably addressed as "the Doctor." He used to have an office where he grew hair on bald men and is the court of last appeal in all I. & Y. disputes on scientific subjects. At present he is waiting for Izzy to find him a job as a washroom attendant.

The election of Thomas E. Dewey as District Attorney did not please all of the political observers of the I. & Y. "After all, what did he do only sperl a lot of t'ings dat gave people what to eat?" a friend of Izzy's called Monkey the Bum argues. "It's tough enough to make a living now. There's plenty of guys walking the streets today without where to flop, without who to ask for a dime." . . .

Izzy deprecates such gloom. When the hat-check concessionaires ask him about business conditions he tries to cheer them.

"Me they ask how's business," he says. "So I always tell them something nice. If good, I say'll stay good. If bad, I say it's the bad weather, people are staying home. Or the weather's too good, they're going to the country. Or it's coming Christmas, they're spending money in the stores. Or it's gone Christmas, they spent all their money." . . .

Mrs. Mollie Yereshevsky, Izzy's wife, works in the store during the day. She is a pink-fleshed, country-looking woman, plump and cheerful. They live in the Lincoln Apartments on Fifty-first Street west of Eighth Avenue, a block populated largely by theatre and night-club people. Mollie has a hard time controlling Izzy's generous impulses. When he opened his first store he readily believed his customers' stories of immense wealth gained quickly through theatrical productions or hat-check concessions in speakeasies. Anyone who bought a box of cigars appeared to Izzy an American millionaire. If the man said the cigars were good, he became on the spot Izzy's friend. When friends asked him to cash checks he always obliged. When the checks bounced, he was sorry because the friends often stayed away as long as two weeks. Reappearing, they would explain that, just before Izzy presented the check at the bank, a wonderful opportunity to buy a nightclub had come their way and to grasp it they had had to draw out all their cash. But to square everything they would offer to sell Izzy the hat-check concession in the club. All he had to do was pay from one to six thousand dollars in advance.

Every time Izzy invested in a concession, he says, one of three things would happen. "Or the nightclub wouldn't open," is the way he puts it, "or it would open and close in a couple weeks, the fellow would keep the concession money, or the club would start to make money they would sell the concession over my head to somebody else. Contracts you didn't have with speakeasies."

Izzy likes to pretend he is less ingenuous now. He adopts a knowing and secretive manner toward strangers, deliberating several seconds before answering even the most innocent question, such as "When did you move here from the Forty-seventh Street store?"

"Six years ago," he will finally whisper.

"Where were you during the War?"

"Fort Totten," Izzy will breathe faintly, after looking around carefully for concealed dictaphones. It sometimes takes as long as three minutes to secure his confidence. When he has given it, he will pull out a drawer in back of the counter to show you his collection of rubber checks.

"About fifty thousand dollars," he boasts, with the pride of a man showing a particularly impressive scar from an appendectomy. "Who shall I collect from, responsible people? I am de most wictim on Broadway." He is very proud of it.

Izzy sells wholesale to the night clubs, limiting his profit to two per cent. The cafés make his cigarette business larger in volume than his trade in cigars, but cigars are nearer to Izzy's heart. Because he has room for only three workers at a time, the cigar makers work in day and night shifts. Luis, the oldest Cuban, sometimes remains in the window making panatelas or perlas until three in the morning. The Cubans sit in a kind of cage, shut off from the rest of the shop by a metal grill. Izzy buys the leaf tobacco and pays the Cubans piecework rates for making the cigars. He keeps the cigars in a large humidor until he makes a sale. When he has an order for a box, Izzy takes it from the humidor, pastes on the revenue stamps, and hands it to the customer.

Izzy believes in cigars. He always recommends them for a hangover—probably because he has never suffered from one.

Discussion

1. What is the author's intention—to present a character sketch, or something more than a character sketch? If something more, how would you describe the intention in this piece?
2. Is the cigar-store proprietor a "type" or a unique individual? What are the details which serve best to characterize Izzy and to place him vividly before the reader?

Writing

Write a detailed character sketch of a colorful member of your community whom you have had many opportunities to observe. Include in your sketch details which suggest the environment in which your subject lives.

MARJORIE KINNAN RAWLINGS · *The Pound Party*

We pay no attention to a newcomer at the Creek.[1] There is no more formal getting-acquainted than among the rabbits in the woods and the birds in the trees. When any one has been here long enough, sooner or later his path crosses that of the other inhabitants and friendship or enmity or mere tolerance sets in. I was never welcomed to the Creek except by Martha, or my presence acknowledged. If I stayed, that was my own business, so long as I minded it. If I did not stay, no one would be surprised and there was no point in making overtures to me. But how was I to have known this and that the Townsends' invitation to a pound party was not a social gesture? I took it at face value.

I knew vaguely that a family lived half a mile away as tenants in Cow Hammock. A lean brown-eyed man who looked like John the Baptist often walked down the sand road in front of my house, scuffling up the dust with long bare feet. A pretty woman with a baby in her arms sometimes walked with him, or followed him an hour later, or sometimes appeared mysteriously with him only on his way back, as though she had gone off to the Creek in the night and he had come after her by daylight. Actually, I found, they fished both from Cow Hammock Landing and from Cross Creek, and one or the other might take the rowboat back and forth. Apparently countless children loitered along the road, like beads set far apart in a string, sometimes in little knots, sometimes singly. They resembled neither St. John nor the woman, but among themselves were as alike as peas in a pod and precisely the color of that vegetable when a little wilted. I began speaking to the children and they answered, not the conventional "Hey!", but "How-do," politely. Apparently none of them went to school, although I believe it was that winter that the school bus began collecting chil-

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[1] The locale is an isolated region of the interior of Florida. [Editors' note]

dren from the Creek. Once a wagon went by, lurching in the ruts, filled to overflowing with these passers-by, integrated at last into one family. They were the Townsends, and a community to themselves, aloof by choice. There were enough of them to need no other contacts. One day two of the small girls appeared at my back door.

The oldest said rapidly, before she should forget the memorized words, "I'm Ella May, and Mama says we're having a pound party tomorrow evening and she'd be proud did you come."

It came to me that this was the first neighborly gesture I had encountered at the Creek. I was touched.

I said, "I'd be glad to. But what is a pound party?"

"Everybody brings a pound of something. Sugar, or butter, or candy, or a cake. A cake's fine. Such as that."

The evening of the party was clear as glass and I walked the half-mile to Cow Hammock. Remembering the swarm of little Townsends, and adding a houseful of guests in my mind's eye, I had doubled my largest cake recipe and baked it in a roasting pan. I thought I must be early, for there was no one in the shabby house but the Townsends. The children were watching and at sight of me scattered within.

I heard a sibilant, "Here she comes."

The suspicion had not yet touched me not only that they knew I should be the sole arrival, but that the party had been built around the probability of my innocent acceptance. The Townsends were in their Sunday best, fresh-scrubbed and uncomfortable. The girls were starched, the boys in stiff clean blue overalls and shirts. I was given a seat on a bench along a wall. Behind me a ragged screen over the open window let in a steady stream of mosquitoes, attracted by the oil lamp on the table. Ella May was assigned with a newspaper to sit beside me and fan my legs to keep them from biting me. When Ella May lagged, Beatrice took up the paper. Their work was enthusiastic but inadequate to the ingenuity of mosquitoes. I slapped furtively. My cake had the place of honor on the bare deal table in the center of the room. A Townsend layer cake dripping sticky icing was pushed modestly to one side. The rest of the refreshments provided by the hostess consisted of a bucket of water, a ten-cent jar of peanut butter and a nickel box of soda crackers.

She said easily, "We'll wait a while to eat, just in case."

I made conversation as best I could. We talked of the heavy crop of blackberries, of the Hamon sow that could not be kept up, no matter how one tried, of the summer rains and of the fishing. Mr. Townsend spoke up brightly when we reached the fishing. Fishing was not only the family livelihood but its delight. The Townsends would have sat all day with poles if they had been millionaires.

"I'll bring you a mess of bream one day," he said.

The talk ebbed. The mosquitoes buzzed and the Townsends slapped automatically. The lamp flickered in a gust of wind.

Mrs. Townsend said, "Be nice, did you blow some, Floyd."

Mr. Townsend echoed, "Blow some, Floyd."

Floyd, the oldest, long, thin and pale, brought out a mouth organ from his pocket and drew up a straight wooden chair. He began to pat his foot before he started his tune. Into the patting came suddenly the whine of the mouth organ. The tune, formless, unrecognizable, was mournful. One sad phrase repeated itself over and over. Other Townsends took up the patting and the rickety floor shook to the thumping. Floyd stopped abruptly.

Mrs. Townsend said to the air, "Be nice, did Preston dance."

Preston was five, the youngest weaned Townsend. The older children seized him and dragged him from the doorway. He hung his head but made no resistance. They seemed to prop him up, then retreated and left him standing alone. Floyd took up his tune. Preston stood staring vacantly. The tune and the party seemed no concern of his. As though one note had set off a mechanical spring, he began to shuffle his feet. His body was still. His arms jerked a little, like a broken jack-in-the-box. His feet shuffled back and forth without rhythm. He might have been trying to keep his footing on a slippery treadmill. This was the dance. I expected him to stop in a moment but he kept it up. The tune, the dance, were endless.

Mrs. Townsend said complacently, "Preston holds out good, don't he?"

The compliment seemed a signal, for he stopped as suddenly as he had begun.

Mrs. Townsend said, "We just as good to eat."

She passed the crackers in one hand and the tiny jar of peanut butter, with a spoon in it, in the other. Eyes followed her hungrily. I refused, to the relief of the eyes. I had a dipper of water and as small a piece of cake as I dared take and yet be courteous. The two cakes disappeared as though a thundershower had melted them. The party was obviously over. Mrs. Townsend accompanied me outside the house and to the head of the path. She looked up into a cloudless and star-lit sky.

"I reckon the threat of bad weather kept the others away," she said placidly.

I inquired about pound parties at the Creek, and my gullibility was verified. Yet the occasion had been truly a party, and the Townsends had done their best to make it festive. I decided that I should go any time I was invited, and should see to it that a larger jar of peanut butter was provided. After the party, the Townsend children and I were great friends. Ella May and Beatrice came almost every day to visit me. Dorsey and Floyd and Glenwood came to do odd chores. They were thin, grave boys and very capable. They moved slowly, like old men, and had the look of age that hunger puts on children. The boys were the right size to climb into the pecan trees and shake down and gather the nuts. The crop was heavy that year, and the filled sacks and baskets amounted to many hundred pounds.

The boys were asked, "What would you do if you had a dollar for every one of those pecans?"

There was silence while the thought of wealth was contemplated.

Dorsey said slowly, "First off, I'd get me a whole plug of Brown Mule tobaccy, all for myself."

Floyd said, "I'd have all I want of rich folks' rations—light bread and jelly."

The questioner went on, "What, no cornbread?"

Glenwood said quickly, "Oh yes. We know you got to have cornbread to grow on."

One week in the next spring the whole family left off its fishing and picked, without enthusiasm, the heavy crop of beans. Their pay on Saturday totalled thirty-six dollars. I thought happily how far this would go. I pictured the big sack of groceries that night, with money laid by for future needs, seed and fertilizer perhaps for a garden of their own. On Monday morning Floyd came to the house.

"Could you let us have two dollars," he asked, "to get us some rations?"

Their money had surely been stolen from them, or the heavy hand of poor folks' luck had made them lose it in some fashion.

"But what happened to the thirty-six dollars you had on Saturday?"

Floyd's pale face was bright with pleasure.

"We bought us an ottymobile," he said.

They were somehow a challenge. I have never known a more exquisite courtesy than the whole family possessed. There were good blood and breeding back of them. I have known no one with more gracious manners. The children were intelligent. Their finances were a problem beyond me and would evidently have to take care of themselves, but it seemed to me that the children's futures held something better than a precarious living fishing on Orange Lake. The two great needs, where I could give tangible help, were their health and their education.

Their green color came from a lifetime of hookworm. I persuaded the mother and father to let the children be treated. The tetrachlorethylene capsules were dispensed free by the state. I obtained capsules and instructions, and set off for the Townsend house one Saturday night. One by one I handed out the preliminary doses of Epsom salts. I gave orders about no further food. On Sunday morning I trudged back again and saw the capsules safely down the Townsends. I departed with the sense of smugness common to all meddlers, leaving word that in ten days we would repeat the treatment. When the ten days were up, the mother refused point blank to let the children be treated again.

"It made them sick," she said.

"Of course it made them sick. They were eaten up with hookworm."

She shook her head.

"'Twouldn't be safe to give that medicine to them again," she said firmly. "It must of been stale. You can't trust nothin' is free."

I was beaten there, and passed on slyly to the matter of education. Once safely in school, I was sure the visiting county nurse would have a chance for a fresh battle against the hookworms.

I would give clothes, I said, to all the children who would go to school. St. John and his wife consulted and it was agreed that Dorsey and Glenwood, Ella May and Beatrice, might condescend to be clothed and to allow the school bus from the village to stop for them.

I am no seamstress, the holding of a threaded needle in my hand producing an acute stomach ache. But a long line of Methodist preachers behind me has left the evil thought in the blood of my brain that the more difficult a job, the more certainly one must apply oneself to its mastering. I bought yards of good gingham and sat hour after hour, developing stomach ulcers, I was certain, at the sewing machine. The girls came for fittings and had light bread and jelly as reward. I turned out creditable dresses, nicely trimmed, and went at the job of underwear. I cut down my own two woolen coats for Ella May and Beatrice. I bought shirts and pants for the boys. I took my bundles with a missionary's pride to the Townsends and modest pleasure was shown in my products. I arranged for the school bus to stop at the entrance to Cow Hammock. I went home and took a large dose of bicarbonate of soda.

The next morning one of the smaller children brought me a dress length of very good silk.

"Mama says will you please make a dress for her."

I took the material to the Townsend house, puzzled, unwilling as yet to be outraged. Mama was on the lake, fishing. I was shown some of Mama's other garments. Mama was a much better seamstress than I—But if the Lord sends forth a strangely agreeable slave to the sewing machine, surely it is pleasanter and more profitable to spend one's time on the lovely lake, dangling a bamboo pole for bream. I left the material and word that my offer to sew for the Townsends applied only to those in need of education, not to those who had advanced in philosophy far beyond me.

The children went to school just long enough to make ownership of the clothes indisputable. Then they were all home again, playing in the sandy yard, or as a special treat, taken along on the fishing parties.

"They didn't like school," St. John informed me gently.

It would be satisfying, if sad, to tell of their tragic maturities. I can only report that they have grown up as healthy as any one else, and within the limits of their congenital leisureliness, are living as active and prosperous lives as their neighbors. I am sometimes haunted by the feeling that it is I who could have learned of the Townsends.

WILLIAM SAROYAN · *The Fifty Yard Dash*

After a certain letter came to me from New York the year I was twelve, I made up my mind to become the most powerful man in my neighborhood. The letter was from my friend Lionel Strongfort. I had clipped a coupon from *Argosy All-Story Magazine,* signed it, placed it in an envelope, and mailed it to him. He had written back promptly, with an enthusiasm bordering on pure delight, saying I was undoubtedly a man of uncommon intelligence, potentially a giant, and—unlike the average run-of-the-mill people of the world who were, in a manner of speaking, dreamwalkers and daydreamers—a person who would some day be somebody.

His opinion of me was very much like my own. It was pleasant, however, to have the opinion so emphatically corroborated, particularly by a man in New York—and a man with the greatest chest expansion in the world. With the letter came several photographic reproductions of Mr. Strongfort wearing nothing but a little bit of leopard skin. He was a tremendous man and claimed that at one time he had been puny. He was loaded all over with muscle and appeared to be somebody who could lift a 1920 Ford roadster and tip it over.

It was an honor to have him for a friend.

The only trouble was—I didn't have the money. I forget how much the exact figure was at the beginning of our acquaintanceship, but I haven't forgotten that it was an amount completely out of the question. While I was eager to be grateful to Mr. Strongfort for his enthusiasm, I didn't seem to be able to find words with which to explain about not having the money, without immediately appearing to be a dreamwalker and a daydreamer myself. So, while waiting from one day to another, looking everywhere for words

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that would not blight our friendship and degrade me to commonness, I talked the matter over with my uncle Gyko, who was studying Oriental philosophy at the time. He was amazed at my curious ambition, but quite pleased. He said the secret of greatness, according to Yoga, was the releasing within one's self of those mysterious vital forces which are in all men.

These strength, he said in English which he liked to affect when speaking to me, ease from God. I tell you, Aram, eat ease wonderful.

I told him I couldn't begin to become the powerful man I had decided to become until I sent Mr. Strongfort some money.

Mohney! my uncle said with contempt. I tell you, Aram, mohney is nawthing. You cannot bribe God.

Although my uncle Gyko wasn't exactly a puny man, he was certainly not the man Lionel Strongfort was. In a wrestling match I felt certain Mr. Strongfort would get a headlock or a half-nelson or a toe hold on my uncle and either make him give up or squeeze him to death. And then again, on the other hand, I wondered. My uncle was nowhere near as big as Mr. Strongfort, but neither was Mr. Strongfort as dynamically furious as my uncle. It seemed to me that, at best, Mr. Strongfort, in a match with my uncle, would have a great deal of unfamiliar trouble—I mean with the mysterious vital forces that were always getting released in my uncle, so that very often a swift glance from him would make a big man quail and turn away, or, if he had been speaking, stop quickly.

Long before I had discovered words with which to explain to Mr. Strongfort about the money, another letter came from him. It was as cordial as the first, and as a matter of fact, if anything, a little more cordial. I was delighted and ran about, releasing mysterious vital forces, turning handsprings, scrambling up trees, turning somersaults, trying to tip over 1920 Ford roadsters, challenging all comers to wrestle, and in many other ways alarming my relatives and irritating the neighbors.

Not only was Mr. Strongfort not sore at me, he had reduced the cost of the course. Even so, the money necessary was still more than I could get hold of. I was selling papers every day, but *that* money was for bread and stuff like that. For a while I got up very early every morning and went around town looking for a small satchel full of money. During six days of this adventuring I found a nickel and two pennies. I found also a woman's purse containing several foul-smelling cosmetic items, no money, and a slip of paper on which was written in an ignorant hand: Steve Hertwig, 3764 Ventura Avenue.

Three days after the arrival of Mr. Strongfort's second letter, his third letter came. From this time on our correspondence became one-sided. In fact, I didn't write at all. Mr. Strongfort's communications were overpowering and not at all easy to answer, without money. There was, in fact, almost nothing to say.

It was wintertime when the first letter came, and it was then that I made up my mind to become the most powerful man in my neighborhood and ultimately, for all I knew, one of the most powerful men in the world. I had ideas of my own as to how to go about getting that way, but I had also the warm friendship and high regard of Mr. Strongfort in New York, and the mystical and furious guardianship of my uncle Gyko, at home.

The letters from Mr. Strongfort continued to arrive every two or three days all winter and on into springtime. I remember, the day apricots were ripe enough to steal, the arrival of a most charming letter from my friend in New York. It was a hymn to newness on earth, the arrival of springtime, the time of youth in the heart, of renewal, fresh strength, fresh determination, and many other things. It was truly a beautiful epistle, probably as fine as any to the Romans or anybody else. It was full of the legend-quality, the world-feeling, and the dignity-of-strength feeling so characteristic of Biblical days. The last paragraph of the lovely hymn brought up, apologetically, the coarse theme of money. The sum was six or seven times as little as it had been originally, and a new element had come into Mr. Strongfort's program of changing me over from a nobody to a giant of tremendous strength, and extreme attractiveness to women. Mr. Strongfort had decided, he said, to teach me everything in one fell swoop, or one sweep fall, or something of that sort. At any rate, for three dollars, he said, he would send me all his precious secrets in one envelope and the rest would be up to me, and history.

I took the matter up with my uncle Gyko, who by this time had reached the stage of fasting, meditating, walking for hours, and vibrating. We had had discussions two or three times a week all winter and he had told me in his own unique broken-English way all the secrets *he* had been learning from Yoga.

I tell you, Aram, he said, I can do *anything*. Eat ease wonderful.

I believed him, too, even though he had lost a lot of weight, couldn't sleep, and had a strange dynamic blaze in his eyes. He was very scornful of the world that year and was full of pity for the dumb beautiful animals that man was mistreating, killing, eating, domesticating, and teaching to do tricks.

I tell you, Aram, he said eat ease creaminal to make the horses work. To keal the cows. To teach the dogs to jump, and the monkeys to smoke pipes.

I told him about the letter from Mr. Strongfort.

Mohney! he said. Always he wants mohney. I do not like heem.

My uncle was getting all his dope free from the theosophy-philosophy-astrology-and-miscellaneous shelf at the Public Library. He believed, however, that he was getting it straight from God. Before he took up Yoga he had been one of the boys around town and a good drinker of *rakhi*, but after the light began to come to him he gave up drinking. He said he was drinking liquor finer than *rakhi* or anything else.

What's that? I asked him.

Aram, he said, eat ease weasdom.

Anyhow, he had little use for Mr. Strongfort and regarded the man as a charlatan.

He's all right, I told my uncle.

But my uncle became furious, releasing mysterious vital forces, and said, I wheel break hease head, fooling all you leatle keads.

He ain't fooling, I said. He says he'll give me all his secrets for three dollars.

I tell you, Aram, my uncle Gyko said, he does not know any secrets. He ease a liar.

I don't know, I said, I'd like to try that stuff out.

Eat ease creaminal, my uncle Gyko said, but I wheel geave you tree dollar.

My uncle Gyko gave me the necessary three dollars and I sent them along to Mr. Strongfort. The envelope came from New

York, full of Mr. Strongfort's secrets. They were strangely simple. It was all stuff I had known anyhow but had been too lazy to pay any attention to. The idea was to get up early in the morning and for an hour or so to do various kinds of acrobatic exercises, which were illustrated. Also to drink plenty of water, get plenty of fresh air, eat good wholesome food, and keep it up until you were a giant.

I felt a little let down and sent Mr. Strongfort a short polite note saying so. He ignored the note and I never heard from him again. In the meantime, I had been following the rules and growing more powerful every day. When I say *in the meantime,* I mean for four days I followed the rules. On the fifth day I decided to sleep instead of getting up and filling the house with noise and getting my grandmother sore. She used to wake up in the darkness of early morning and shout that I was an impractical fool and would never be rich. She would go back to sleep for five minutes, wake up, and then shout that I would never buy and sell for a profit. She would sleep a little more, waken, and shout that there were once three sons of a king; one was wise like his father; the other was crazy about girls; and the third had less brains than a bird. Then she would get out of bed, and, shouting steadily, tell me the whole story while I did my exercises.

The story would usually warn me to be sensible and not go around waking her up before daybreak all the time. That would always be the moral, more or less, although the story itself would be about three sons of some king, or three brothers, each of them very wealthy and usually very greedy, or three daughters, or three proverbs, or three roads, or something else like that.

She was wasting her breath, though, because I wasn't enjoying the early-morning acrobatics any more than she was. In fact, I was beginning to feel that it was a lot of nonsense, and that my uncle Gyko had been right about Mr. Strongfort in the first place.

So I gave up Mr. Strongfort's program and returned to my own, which was more or less as follows: to take it easy and grow to be the most powerful man in the neighborhood without any trouble or exercise. Which is what I did.

That spring Longfellow School announced that a track meet was to be held, one school to compete against another; *everybody* to participate.

Here, I believed, was my chance. In my opinion I would be first in every event.

Somehow or other, however, continuous meditation on the theme of athletics had the effect of growing into a fury of anticipation that continued all day and all night, so that before the day of the track meet I had run the fifty-yard dash any number of hundreds of times, had jumped the running broad jump, the standing broad jump, and the high jump, and in each event had made my competitors look like weaklings.

This tremendous inner activity, which was strictly Yoga, changed on the day of the track meet into fever.

The time came at last for me and three other athletes, one of them a Greek, to go to our marks, get set, and go; and I did, in a blind rush of speed which I knew had never before occurred in the history of athletics.

It seemed to me that never before had any living man moved so swiftly. Within myself I ran the fifty yards fifty times before I so much as opened my eyes to find out how far back I had left the other runners. I was very much amazed at what I saw.

Three boys were four yards ahead of me and going away.

It was incredible. It was unbelievable, but it was obviously the truth. There ought to be some mistake, but there wasn't. There they were, ahead of me, going away.

Well, it simply meant that I would have to overtake them, with my eyes open, and win the race. This I proceeded to do. They continued, incredibly, however, to go away, in spite of my intention. I became irritated and decided to put them in their places for the impertinence, and began releasing all the mysterious vital forces within myself that I had. Somehow or other, however, not even this seemed to bring me any closer to them and I felt that in some strange way I was being betrayed. If so, I decided, I would shame my betrayer by winning the race in spite of the betrayal, and once again I threw fresh life and energy into my running. There wasn't a great distance still to go, but I knew I would be able to do it.

Then I knew I wouldn't.

The race was over.

I was last, by ten yards.

Without the slightest hesitation I protested and challenged the runners to another race, same distance, back. They refused to consider the proposal, which proved, I knew, that they were afraid to race me. I told them they knew very well I could beat them.

It was very much the same in all the other events.

When I got home I was in high fever and very angry. I was delirious all night and sick three days. My grandmother took very good care of me and probably was responsible for my not dying. When my uncle Gyko came to visit me he was no longer hollow-cheeked. It seems he had finished his fast, which had been a long one—forty days or so; and nights too, I believe. He had stopped meditating, too, because he had practically exhausted the subject. He was again one of the boys around town, drinking, staying up all hours, and following the women.

I tell you, Aram, he said, we are a great family. We can do *anything.*

ARTHUR C. BENSON · *The Farmyard*

There is a big farmyard close to the house where I am staying just now; it is a constant pleasure, as I pass that way, to stop and watch the manners and customs of the beasts and birds that inhabit it; I am ashamed to think how much time I spend in hanging over the gate, to watch the little dramas of the byre. I am not sure that pigs are an altogether satisfactory subject of contemplation. They always seem to me like a fallen race that has seen better days. They are able, intellectual, inquisitive creatures. When they are driven from place to place, they are not gentle or meek, like cows and sheep, who follow the line of least resistance. The pig is suspicious and cautious; he is sure that there is some uncomfortable plot on foot, not wholly for his good, which he must try to thwart if he can. Then, too, he never seems quite at home in his deplorably

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—Taken from *The Thread of Gold,* by Arthur C. Benson, published and copyright, 1907, by E. P. Dutton & Co., Inc., New York.

filthy surroundings; he looks at you, up to the knees in ooze, out of his little eyes, as if he would live in a more cleanly way, if he were permitted. Pigs always remind me of the mariners of Homer, who were transformed by Circe; there is a dreadful humanity about them, as if they were trying to endure their base conditions philosophically, waiting for their release.

But cows bring a deep tranquillity into the spirit; their glossy skins, their fragrant breath, their contented ease, their mild gaze, their Epicurean rumination tend to restore the balance of the mind, and make one feel that vegetarianism must be a desirable thing. There is the dignity of innocence about the cow, and I often wish that she did not bear so poor a name, a word so unsuitable for poetry; it is lamentable that one has to take refuge in the archaism of *kine,* when the thing itself is so gentle and pleasant.

But the true joy of the farmyard is, undoubtedly, in the domestic fowls. It is long since I was frightened of the turkeys; but I confess that there is still something awe-inspiring about an old turkey-cock, with a proud and angry eye, holding his breath till his wattles are blue and swollen, with his fan extended, like a galleon in full sail, his wings held stiffly down, strutting a few rapid steps, and then slowly revolving, like a king in royal robes. There is something tremendous about his supremacy, his almost intolerable pride and glory.

And then we come to cocks and hens. The farmyard cock is an incredibly grotesque creature. His furious eye, his blood-red crest, make him look as if he were seeking whom he might devour. But he is the most craven of creatures. In spite of his air of just anger, he has no dignity whatever. To hear him raise his voice, you would think that he was challenging the whole world to combat. He screams defiance, and when he has done, he looks round with an air of satisfaction. "There! that is what you have to expect if you interfere with me!" he seems to say. But an alarm is given; the poultry seek refuge in a hurried flight. Where is the champion? You would expect to see him guarding the rear, menacing his pursuer; but no, he has headed the flight, he is far away, leading the van with a desperate intentness.

This morning I was watching the behaviour of a party of fowls, who were sitting together on a dusty ledge above the road, sheltering from the wind. I do not know whether they meant to be as humorous as they were, but I can hardly think they were not amused at each other. They stood and lay very close together, with fierce glances, and quick, jerky motions of the head. Now and then one, tired of inaction, raised a deliberate claw, bowed its head, scratched with incredible rapidity, shook its tumbled feathers, and looked round with angry self-consciousness, as though to say: "I will ask any one to think me absurd at his peril." Now and then one of them kicked diligently at the soil, and then, turning round, scrutinised the place intently, and picked delicately at some minute object. One examined the neck of her neighbor with a fixed stare, and then pecked the spot sharply. One settled down on the dust, and gave a few vigorous strokes with her legs to make herself more comfortable. Occasionally they all crooned and wailed together, and at the passing of a cart all stood up defiantly, as if intending to hold their fort at all hazards. Presently a woman came out of a house-door opposite, at which the whole party ran furiously and breathlessly across the road, as if their lives depended upon arriving in time. There was not a gesture or a motion that was not admirably conceived, intensely dramatic.

Again, what is more delightfully absurd than to see a hen find a large morsel which she cannot deal with at one gulp? She has no sense of diplomacy or cunning; her friends, attracted by her motions, close in about her; she picks up the treasured provender, she runs, bewildered with anxiety, till she has distanced her pursuers; she puts the object down and takes a couple of desperate pecks; but her kin are at her heels; another flight follows, another wild attempt; for half an hour the same tactics are pursued. At last she is at bay; she makes one prodigious effort, and gets the treasure down with a convulsive swallow; you see her neck bulge with the moving object; while she looks at her baffled companions with an air of meek triumph.

Ducks, too, afford many simple joys to the contemplative mind. A slow procession of white ducks, walking delicately, with heads lifted high and timid eyes, in a long line, has the air of an ecclesiastical procession. The singers go before, the minstrels follow after. There is something liturgical, too, in the way in which, as if by a preconcerted signal, they all cry out together, standing in a group, with a burst of hoarse cheering, cut off suddenly by an intolerable silence. The arrival of ducks upon the scene, when the fowls are fed, is an impressive sight. They stamp wildly over the pasture, falling, stumbling, rising again, arrive on the scene with a desperate intentness, and eat as though they had not seen food for months.

The pleasure of these farmyard sights is twofold. It is partly the sense of grave, unconscious importance about the whole business, serious lives lived with such whole-hearted zeal. There is no sense of divided endeavour; the discovery of food is the one thing in the world, and the sense of repletion is also the sense of virtue. But there is something pathetic, too, about the taming to our own ends of these forest beasts, these woodland birds; they are so unconscious of the sad reasons for which we desire their company, so unsuspicious, so serene! Instead of learning by the sorrowful experience of generations what our dark purposes are, they become more and more fraternal, more and more dependent. And yet how little we really know what their thoughts are. They are so unintelligent in some regions, so subtly wise in others. We cannot share our thoughts with them; we cannot explain anything to them. We can sympathise with them in their troubles, but cannot convey our sympathy to them. There is a little bantam hen here, a great pet, who comes up to the front door with the other bantams to be fed. She has been suffering for some time from an obscure illness. She arrives with the others, full of excitement, and begins to pick at the grain thrown them; but the effort soon exhausts her; she goes sadly apart, and sits with dim eye and ruffled plumage, in silent suffering, wondering, perhaps, why she is not as brisk and joyful as ever, what is the sad thing that has befallen her. And one can do nothing, express nothing of the pathetic sorrow that fills one's mind.

Discussion

1. Show in detail why this selection can be called an example of artistic rather than practical or expository description.
2. Point out the comparisons of particular animals with other things. Which of these comparisons are especially vivid and true?
3. What qualities and ideas give unity to the selection?
4. Mark all descriptive words and phrases which seem especially good to you. Indicate the part of speech of each unusually vivid word. Does the vividness of the selection depend much on metaphors and similes? Explain.

Writing

Write a primarily descriptive essay in which you re-create vividly an experience such as one of the following: a visit to a great department store on bargain day; an exploratory trip through a cave; a major league baseball park on the day of a big game; a hike through a forest; a walk down a little-used railroad track; some section of the zoo on a quiet day.

LAFCADIO HEARN · *A Creole Mystery*

They came together from Havana, mistress and servant. The mistress had a strange and serpentine sort of beauty;—the litheness of a snake in every movement;—the fascination of an ophidian; —and great eyes that flamed like black opals. One felt on meeting her that the embraces of lianas and of ivy were less potent to fetter than hers—and to fetter forever. Her voice was remarkably sweet, but had strangely deep tones in it;—and her laugh caused a feeling of unpleasant surprise. It was a mocking, weird, deep laugh, uttered without any change of features; there was no smile, no movement of the facial muscles; the lips simply opened and the laugh came pealing from her white throat, while the eyes, large, brilliant, and sinister with mockery, fixed themselves with motionless lids upon the face of the person present. But she seldom laughed.

None knew who she was. She was a mystery to the French people of the quarter. Her rooms were luxuriously furnished and hung in blue satin. At long intervals strangers called upon her—men of olivaceous complexion and hair tropically black with dead-blue lights in it. They spoke only in Spanish; and their interviews lasted far into the night. Sometimes they seemed to be gay. Gossipy people said they heard the popping of champagne corks; and a perfume of Havana tobacco floated out of the windows and hung about the shrubbery that enshrouded the veranda. Sometimes, however, there were sinister sounds as of men's voices raised in anger,

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— From Lafcadio Hearn, *Creole Sketches,* Boston: Houghton Mifflin Co., 1922. First appeared in the *Item,* New Orleans, October 6, 1880.

and at intervals the deep laugh of the mysterious woman, long and loud and clear, and vibrant with mockery.

The servant was a mulattress, tall and solidly constructed as a caryatid of bronze. She was not less of a mystery than her mistress. She spoke French and Spanish with equal facility, but these only on rare occasions. Generally no mute in the seraglio of a Sultan could be more silent or more impassible. She never smiled. She never gossiped. She never seemed to hear or to see; yet she saw and heard all. Only a strange face could attract her attention—for a brief moment, during which she gazed upon it with an indescribable look that seemed potent enough to burn what it touched. It was a look that made its living object feel that his face was photographed in her brain and would be equally vivid there fifty years after. The foreigners who came were received by her in silence and without scrutiny. Their faces were doubtless familiar. None of them ever spoke to her. She seemed to be more than a Doppelgänger, and to appear in five or six different rooms at the same time. Nothing could transpire unperceived by her; though she seemed never to look at anything. Her feet were never heard. She moved like a phantom through the house, opening and closing doors noiselessly as a ghost. She always suddenly appeared when least expected. When looked for, she was never to be found. Her mistress never called her. When needed, she appeared to rise suddenly from the floor, like those Genii of Arabian fables summoned by a voiceless wish. She never played with the children; and these hushed their voices when she glided by them in silence. With a subtle intelligence seemingly peculiar to her, she answered questions before they were fully asked. She never seemed to sleep. Persons who visited the house were as certain to meet her at the entrance three hours before sunrise as at any other hours. She appeared to be surprised at nothing, and to anticipate everything. She was even a greater mystery, if possible, than her mistress.

At last the swarthy foreigners called more frequently and the interviews grew stormier. It was said that sometimes the conversations were held in Catalan; and that when Catalan was spoken there were angrier words and wickeder laughing. And one night the interviews were so terrible that all the old-fashioned French folks in the quarter put their heads out of the windows to listen. There were sounds as of broken glass and passionate blows given to the mahogany table. And the strange laughter suddenly ceased.

Next morning the postman calling to deliver a registered letter found the rooms empty. The spectral servant was gone. The sinister mistress was gone. The furniture was all there; and the only records of the night's mystery were two broken glasses and stains of wine on the rich carpet. The bed had been undisturbed. The clock still ticked on its marble pedestal. The wind moved the blue silk hangings. A drowsy perfume of woman lingered in the rooms like incense. The wardrobes retained their wealth of silks and laces. The piano remained open. A little Angora cat was playing with a spool of silk under the table. A broken fan lay on the luxuriously padded rocking-chair; and a bouquet of camellias lay dying upon the mantelpiece.

The letter was never delivered. The rooms remained as they were, until mould and dust came to destroy the richness of their upholstery. The strangers never came back, nor did any ever hear what became of them. The mystery remains unexplained. The letter remains in the dead-letter office. But I would like to open it and find out what is in it;—wouldn't you?

Discussion

1. What is the dominant tone or feeling conveyed by the descriptive passages of the selection? What words or phrases set the tone, and how is it maintained?
2. Should the author have revealed the contents of the letter? Do you consider the withholding of the letter a legitimate means of achieving mystery?
3. Find five examples of simile in the selection. Do you find any examples of metaphor?

Writing

Write an account of an unconventional individual or household of people who came to live in your community. Emphasize the impression made on the neighbors and on yourself.

ROBERT BENCHLEY · *Stop Those Hiccoughs!*

Anyone will be glad to admit that he knows nothing about beagling, or the Chinese stock market, or ballistics, but there is not a man or woman alive who does not claim to know how to cure hiccoughs. The funny thing is that the hiccoughs are never cured until they get darned good and ready.

The most modest and unassuming man in the world becomes an arrogant know-it-all in the presence of hiccoughs—in somebody else.

"Don't be silly," he says, patronizingly. "Just put your head under your arm, hold a glass of water against the back of your neck, and count to five hundred by fives without taking a breath. It never fails."

Then, when it *has* failed, he blames you. "It's absolutely sure-fire if you only follow my directions," he says. He also implies darkly that what is ailing you is not just merely hiccoughs. "My method can't be expected to cure drunkenness, you know," he says.

To date, I have been advised to perform the following feats to cure hiccoughs:

Bend the body backward until the head touches the floor, and whistle in reverse.

Place the head in a pail of water and inhale twelve times deeply.

Drink a glass of milk from the right hand with the right arm twisted around the neck until the milk enters the mouth from the left side.

Hop, with the feet together, up and down a flight of steps ten times, screaming loudly at each hop.

Roll down a long, inclined lawn, snatching a mouthful of grass up each time the face is downward.

I have tried them all, with resultant torn ligaments, incipient drowning, lockjaw and arsenic poisoning, but, each time, at the

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— From *My Ten Years in a Quandary* by Robert Benchley. Copyright, 1936, by Robert C. Benchley. Reprinted by permission of Harper and Brothers, publishers.

finish of the act, and a few seconds of waiting while my mentor says, triumphantly: "See! What did I tell you?" that one, big hiccough always breaks the tension, indicating that the whole performance has been a ghastly flop.

My latest fiasco came as the result of reading the prescription of a Boston doctor, and almost resulted in my being put away as an irresponsible person. "All that the sufferer has to do," wrote the doctor, "is to blow up an ordinary paper bag, as if to explode it, and then hold it over the mouth and nose tightly, breathing in and out of the bag instead of in and out of the open air."

This, according to the doctor, creates an excess of carbon monoxide gas in the bag, which is breathed over and over again, acting on a nervous center of the brain and curing the hiccoughs.

Being alone in the room at the time, I blew the bag up and held it tightly over my face, including not only my mouth and nose, but my eyes as well, like a gas-mask. I subjected myself to this treatment for possibly three minutes, walking around the room at the same time to keep from getting bored.

When I removed the bag I found myself the object of the silent but terrified scrutiny of my wife, who had entered the room without my knowing it, and who had already motioned for corroborating witnesses from the next room, two of whom were standing in the doorway, transfixed.

My explanation that I was curing hiccoughs did not go very big, as what I had obviously been doing was walking around the room alone with a paper bag over my head. This is *not* a good sign.

Incidentally, I still have my hiccoughs.

Discussion or Writing

Make a list of other common annoyances that would make good subjects for humorous essays. Discuss how you would plan such essays.

HOWARD VINCENT O'BRIEN · *When Golf Was a Game*

It was late at night, but the house was ablaze with light. The little ones, who should long since have been abed, were very noisily awake. Plainly, something was going on, but what it was no one would tell me.

I was led into a room and the door was closed. "Prepare yourself for a shock," I was warned. Outside, I could hear voices whispering. Suddenly the door was flung open and in marched the family, singing, "Happy birthday to you!" And on my lap they laid their collective gift—a gorgeous set of golf clubs, matched, numbered, certified and hooded.

It was a shock, as they had promised. I blanched and my hand shook as I fingered the chromium-plated instruments of a renewed servitude. Years ago I had shaken off the yoke of this enslaving pastime and had been a relatively free man thereafter. Now I am back in the galleys, pivoting, pronating and trying once more to solve the unanswerable mystery of the putt.

It is the family's idea that I am to get out of doors, relax, enjoy the beauties of nature and drink the scented air of the greensward. Too young to know what I have been through, they cannot understand that in presenting me with a set of golf clubs they are presenting a runaway slave with a nice new set of chains, a convalescent from mortal illness with a new set of lethal germs, a cured addict of morphine with a bright and shining hypodermic!

The fact is that I was once a devotee of slice and hook. My lips first touched the fatal cup 'way back in the days of the hard ball, when 150 yards was a man's drive and people in red coats played against bogey. I used implements now known only to the archaeologist, such as the cleek and the baffy. In those days clubs had names (as did holes) and science had not invaded sport with

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—From *All Things Considered*, by Howard Vincent O'Brien, copyright 1948; used by special permission of the publishers, The Bobbs-Merrill Company, Inc. This essay first published in the Chicago *Daily News*, July 11, 1935.

a numbering system that made golf as dryly technical as the triangulation of an artillery problem.

In those days the turf was mowed by sheep and one drove from a pinch of sand. There were bunkers to impede the blunderer and they stayed put from season to season. There were no brass-buttoned flunkies fluttering around the locker houses and no such thing as a starting time. Even strong men used floaters on the water holes.

In that consulship of Plancus golf was a *game.* A set of sticks, gathered from here and there and stoutly shafted with hickory, lasted a lifetime and were passed on to posterity. The annual model mania had not appeared, and the ball with a center guaranteed to outdrive all others had not begun to dominate the advertising pages of the magazines. Men did not visit their professional oftener than they visited their dentists, and a round of golf (on what was then called a "links") had not tried to outdo the speculative possibilities of the stock market.

Ah, well, it is a sign of advancing senility when one begins to lament a golden past. One must keep abreast of changing times. I shall yield to the numerology of modern golf and bow to the necessity of getting my right hand through, as with cold and repellent steel I smite a piece of dry ice enveloped in latex. I shall be more or less miserable, but it will be the misery of the mustard plaster. In my anguish at the hopeless task of trying to manage my anatomy in the manner of Bobby Jones, I shall forget my lesser woes.

As I struggle to keep my left hand over, my arm straight, my head down and my courage up, I shall achieve respite from the task of trying to make sense out of politics. In the pain of missed putts I shall forget the gnawing ache that plagues the amateur economist. And when my ball goes soaring off into the bushes, in the old familiar slice, I shall bellow so loud that the reverberations from Washington will echo thinly in my ears.

The more I think of it the happier this choice of birthday gifts becomes. I have had some years of freedom, but I begin to suspect that the domesticated bird is happiest in a cage. Like a recaptured canary I shall thrill contentedly inside the bars of golf, and when, at the end of the day's pleasure, the last torturing putt gurgles in the cup, work will seem like play.

JAMES THURBER · *I Went to Sullivant*

I was reminded the other morning—by what, I don't remember and it doesn't matter—of a crisp September morning last year when I went to the Grand Central to see a little boy of ten get excitedly on a special coach that was to take him to a boys' school somewhere north of Boston. He had never been away to school before. The coach was squirming with youngsters; you could tell, after a while, the novitiates, shining and tremulous and a little awed, from the more aloof boys, who had been away to school before, but they were all very much alike at first glance. There was for me (in case you thought I was leading up to that) no sharp feeling of old lost years in the tense atmosphere of that coach, because I never went away to a private school when I was a little boy. I went to Sullivant School in Columbus. I thought about it as I walked back to my hotel.

Sullivant was an ordinary public school, and yet it was not like any other I have ever known of. In seeking an adjective to describe the Sullivant School of my years—1900 to 1908—I can only think of "tough." Sullivant School was tough. The boys of Sullivant came mostly from the region around Central Market, a poorish district with many colored families and many white families of the laboring class. The school district also included a number of homes of the upper classes because, at the turn of the century, one or two old residential streets still lingered near the shouting and rumbling of the market, reluctant to surrender their fine old houses to the encroaching rabble of commerce, and become (as, alas, they now have) mere vulgar business streets.

I remember always, first of all, the Sullivant baseball team. Most grammar-school baseball teams are made up of boys in the seventh and eighth grades, or they were in my day, but with Sullivant it was different. Several of its best players were in the fourth grade, known to the teachers of the school as the Terrible Fourth. In that grade you first encountered fractions and long division, and

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—From James Thurber, *The Middle-Aged Man on the Flying Trapeze,* Harper and Bros., 1935. Reprinted by permission of the author.

many pupils lodged there for years, like logs in a brook. Some of the more able baseball-players had been in the fourth grade for seven or eight years. Then, too, there were a number of boys, most of them colored (about half of the pupils at Sullivant were colored), who had not been in the class past the normal time but were nevertheless deep in their teens. They had avoided starting to school—by eluding the truant officer—until they were ready to go into long pants, but he always got them in the end. One or two of these fourth-graders were seventeen or eighteen years old, but the dean of the squad was a tall, husky young man of twenty-two who was in the fifth grade (the teachers of the third and fourth had got tired of having him around as the years rolled along and had pushed him on). His name was Dana Waney and he had a mustache. Don't ask me why his parents allowed him to stay in school so long. There were many mysteries at Sullivant that were never cleared up. All I know is why he kept on in school and didn't go to work: he liked playing on the baseball team, and he had a pretty easy time in class, because the teachers had given up asking him any questions at all years before. The story was that he had answered but one question in the seventeen years he had been going to classes at Sullivant and that was "What is one use of the comma?" "The commy," said Dana, embarrassedly unsnarling his long legs from beneath a desk much too low for him, "is used to shoot marbles with." ("Commies" was our word for those cheap, ten-for-a-cent marbles, in case it wasn't yours.)

The Sullivant School baseball team of 1905 defeated several high-school teams in the city and claimed the high-school championship of the state, to which title it had, of course, no technical right. I believe the boys could have proved their moral right to the championship, however, if they had been allowed to go out of town and play all the teams they challenged, such as the powerful Dayton and Toledo nines, but their road season was called off after a terrific fight that occurred during a game in Mt. Sterling, or Piqua, or Zenia—I can't remember which. Our first baseman—Dana Waney—crowned the umpire with a bat during an altercation over a called strike and the fight was on. It took place in the fourth inning, so of course the game was never finished (the battle continued on down into the business section of the town and raged for hours, with much destruction of property), but since Sullivant was ahead at the time 17 to 0 there could have been no doubt as to the outcome. Nobody was killed. All of us boys were sure our team could have beaten Ohio State University that year, but they wouldn't play us; they were scared.

Waney was by no means the biggest or toughest guy on the grammar-school team; he was merely the oldest, being about a year the senior of Floyd, the colored centre-fielder, who could jump five feet straight into the air without taking a running start. Nobody knew—not even the Board of Education, which once tried to find out—whether Floyd was Floyd's first name or his last name. He apparently only had one. He didn't have any parents, and nobody, including himself, seemed to know where he lived. When teachers insisted that he must have another name to go with Floyd, he would grow sullen and ominous and they would cease questioning him, because he was a dangerous scholar in a schoolroom brawl, as Mr. Harrigan, the janitor, found out one morning when he was called in by a screaming teacher (all our teachers were women) to get Floyd under control after she had tried to whip him and he had begun to take the room apart, beginning with the desks. Floyd broke into small pieces the switch she had used on him (some said he also ate it; I don't know, because I was home sick at the time with mumps or something). Harrigan was a burly, iron-muscled janitor, a man come from a long line of coal-shovellers, but he was no match for Floyd, who had, to be sure, the considerable advantage of being more aroused than Mr. Harrigan when their fight started. Floyd had him down and was sitting on his chest in no time, and Harrigan had to promise to be good and to say "Dat's what Ah get" ten times before Floyd would let him up.

I don't suppose I would ever have got through Sullivant School alive if it hadn't been for Floyd. For some reason he appointed himself my protector, and I needed one. If Floyd was known to be on your side, nobody in the school would dare be "after" you and chase you home. I was one of the ten or fifteen male pupils in Sullivant School who always, or almost always, knew their lessons, and I believe Floyd admired the mental prowess of a youngster who knew how many continents there were and whether or not the sun was inhabited. Also, one time when it came my turn to read to the class—we used to take turns reading American history aloud—I came across the word "Duquesne" and knew how to pronounce it. That charmed Floyd, who had been slouched in his seat idly following the printed page of his worn and pencilled textbook. "How you know dat was Dukane, boy?" he asked me after class. "I don't know," I said. "I just knew it." He looked at me with round eyes. "Boy, dat's sump'n," he said. After that, word got around that Floyd would beat the tar out of anybody that messed around me. I wore glasses from the time I was eight and I knew my lessons, and both of those things were considered pretty terrible at Sullivant. Floyd had one idiosyncrasy. In the early nineteen-hundreds, long warm furry gloves that came almost to your elbows were popular with boys, and Floyd had one of the biggest pairs in school. He wore them the year around.

Dick Peterson, another colored boy, was an even greater figure on the baseball team and in the school than Floyd was. He had a way in the classroom of blurting out a long deep rolling "beee—eee—ahhhh!" for no reason at all. Once he licked three boys his own size single-handed, really single-handed, for he fought with his right hand and held a mandolin in his left hand all the time. It came out uninjured. Dick and Floyd never met in mortal combat, so nobody ever knew which one could "beat," and the scholars were about evenly divided in their opinions. Many a fight started among them after school when that argument came up. I think school never let out at Sullivant without at least one fight starting up, and sometimes there were as many as five or six raging between the corner of Oak and Sixth Streets and the corner of Rich and Fourth Streets, four blocks away. Now and again virtually the whole school turned out to fight the Catholic boys of the Holy Cross Academy in Fifth Street near Town, for no reason at all—in winter with snowballs and iceballs, in other seasons with fists, brickbats, and clubs. Dick Peterson was always in the van, yelling, singing, beeee-ahing, whirling all the way around when he swung with his right or (if he hadn't brought his mandolin) his left and missed. He made himself the pitcher on the baseball team because he was the captain. He was the captain because everybody was afraid to challenge his self-election, except Floyd. Floyd was too lazy to pitch and he didn't care who was captain, because he didn't fully comprehend what that meant. On one occasion, when Earl Battec, a steam-fitter's son, had shut out Mound Street School for six innings without a hit, Dick took him out of the pitcher's box and went in himself. He was hit hard and the other team scored, but it didn't make much difference, because the margin of Sullivant's victory was so great. The team didn't lose a game for five years to another grammar school. When Dick Peterson was in the sixth grade, he got into a saloon brawl and was killed.

When I go back to Columbus I always walk past Sullivant School. I have never happened to get there when classes were letting out, so I don't know what the pupils are like now. I am sure there are no more Dick Petersons and no more Floyds, unless Floyd is still going to school there. The play yard is still entirely bare of grass and covered with gravel, and the sycamores still line the curb between the schoolhouse fence and the Oak Street car line. A street-car line running past a schoolhouse is a dangerous thing as a rule, but I remember no one being injured while I was attending Sullivant. I do remember, however, one person who came very near being injured. He was a motorman on the Oak Street line, and once when his car stopped at the corner of Sixth to let off passengers, he yelled at Chutey Davidson, who played third base on the ball team, and was a member of the Terrible Fourth, to get out of the way. Chutey was a white boy, fourteen years old, but huge for his age, and he was standing on the tracks, taking a chew of tobacco. "Come ahn down offa that car an' I'll knock your block off!" said Chutey, in what I can only describe as a Sullivant tone of voice. The motorman waited until Chutey moved slowly off the tracks; then he went on about his business. I think it was lucky for him that he did. There were boys in those days.

MARK TWAIN · *Go to the Ant?*

Now and then, while we rested, we watched the laborious ant at his work. I found nothing new in him—certainly nothing to change my opinion of him. It seems to me that in the matter of intellect the ant must be a strangely overrated bird. During many summers, now, I have watched him, when I ought to have been in

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— From A *Tramp Abroad*, 1880. The name "Mark Twain" used by permission of Harper and Brothers.

better business, and I have not yet come across a living ant that seemed to have any more sense than a dead one. I refer to the ordinary ant, of course; I have had no experience of those wonderful Swiss and African ones which vote, keep drilled armies, hold slaves, and dispute about religion. Those particular ants may be all that the naturalist paints them, but I am persuaded that the average ant is a sham. I admit his industry, of course; he is the hardest-working creature in the world—when anybody is looking—but his leather-headedness is the point I make against him. He goes out foraging, he makes a capture, and then what does he do? Go home? No—he goes anywhere but home. He doesn't know where home is. His home may be only three feet away—no matter, he can't find it. He makes his capture, as I have said; it is generally something which can be of no sort of use to himself or anybody else; it is usually seven times bigger than it ought to be; he hunts out the awkwardest place to take hold of it; he lifts it bodily up in the air by main force, and starts; not toward home, but in the opposite direction; not calmly and wisely, but with a frantic haste which is wasteful of his strength; he fetches up against a pebble, and instead of going around it, he climbs over it backward dragging his booty after him, tumbles down on the other side, jumps up in a passion, kicks the dust off his clothes, moistens his hands, grabs his property viciously, yanks it this way, then that, shoves it ahead of him a moment, turns tail and lugs it after him another moment, gets madder and madder, then presently hoists it into the air and goes tearing away in an entirely new direction; comes to a weed; it never occurs to him to go around it; no, he must climb it; and he does climb it, dragging his worthless property to the top—which is as bright a thing to do as it would be for me to carry a sack of flour from Heidelberg to Paris by way of Strasbourg steeple; when he gets up there he finds that that is not the place; takes a cursory glance at the scenery and either climbs down again or tumbles down, and starts off once more—as usual, in a new direction. At the end of half an hour he fetches up within six inches of the place he started from and lays his burden down; meantime he has been over all the ground for two yards around, and climbed all the weeds and pebbles he came across. Now he wipes the sweat from his brow, strokes his limbs, and then marches aimlessly off, in as violent a hurry as ever. He traverses a good deal of zigzag country, and by and by stumbles on his same booty again. He does not remember to have ever seen it before; he looks around to see which is not the way home, grabs his bundle and starts; he goes through the same adventures he had before; finally stops to rest, and a friend comes along. Evidently the friend remarks that a last year's grasshopper leg is a very noble acquisition, and inquires where he got it. Evidently the proprietor does not remember exactly where he did get it, but thinks he got it "around here somewhere." Evidently the friend contracts to help him freight it home. Then, with a judgment peculiarly antic (pun not intentional), they take hold of opposite ends of that grasshopper leg and begin to tug with all their might in opposite directions. Presently they take a rest and confer together. They decide that something is wrong, they can't make out what. Then they go at it again, just as before. Same result. Mutual recriminations follow. Evidently each accuses the other of being an obstructionist. They warm up, and the dispute ends in a fight. They lock themselves together and chew each other's jaws for a while; then they roll and tumble on the ground till one loses a horn or a leg and has to haul off for repairs. They make up and go to work again in the same old insane way, but the crippled ant is at a disadvantage; tug as he may, the other one drags off the booty and him at the end of it. Instead of giving up, he hangs on, and gets his shins bruised against every obstruction that comes in the way. By and by, when that grasshopper leg has been dragged all over the same old ground once more, it is finally dumped at about the spot where it originally lay, the two perspiring ants inspect it thoughtfully and decide that dried grasshopper legs are a poor sort of property after all, and then each starts off in a different direction to see if he can't find an old nail or something else that is heavy enough to afford entertainment and at the same time valueless enough to make an ant want to own it.

There in the Black Forest, on the mountainside, I saw an ant go through with such a performance as this with a dead spider of fully ten times his own weight. The spider was not quite dead, but too far gone to resist. He had a round body the size of a pea. The little ant—observing that I was noticing—turned him on his back, sunk his fangs into his throat, lifted him into the air, and started vigorously off with him, stumbling over little pebbles, stepping on the spider's legs and tripping himself up, dragging him backward, shoving him bodily ahead, dragging him up stones six inches high instead of going around them, climbing weeds twenty times his own height and jumping from their summits—and finally leaving him in the middle of the road to be confiscated by any other fool of an ant that wanted him. I measured the ground which this ass traversed, and arrived at the conclusion that what he had accomplished inside of twenty minutes would constitute some such job as this—relatively speaking—for a man; to wit: to strap two eight-hundred-pound horses together, carry them eighteen hundred feet, mainly over (not around) boulders averaging six feet high, and in the course of the journey climb up and jump from the top of one precipice like Niagara, and three steeples, each a hundred and twenty feet high; and then put the horses down, in an exposed place, without anybody to watch them, and go off to indulge in some other idiotic miracle for vanity's sake.

Science has recently discovered that the ant does not lay up anything for winter use. This will knock him out of literature, to some extent. He does not work, except when people are looking, and only then when the observer has a green, naturalistic look, and seems to be taking notes. This amounts to deception, and will injure him for the Sunday schools. He has not judgment enough to know what is good to eat from what isn't. This amounts to ignorance, and will impair the world's respect for him. He cannot stroll around a stump and find his way home again. This amounts to idiocy, and once the damaging fact is established, thoughtful people will cease to look up to him, the sentimental will cease to fondle him. His vaunted industry is but a vanity and of no effect, since he never gets home with anything he starts with. This disposes of the last remnant of his reputation and wholly destroys his main usefulness as a moral agent, since it will make the sluggard hesitate to go to him any more. It is strange, beyond comprehension, that so manifest a humbug as the ant has been able to fool so many nations and keep it up so many ages without being found out.

ROBERT BENCHLEY · *The Mystery of Bridge Building*

I am not much of a one to be writing on bridge building, having never really built a bridge myself, but if the reader (you) will overlook a little vagueness in some of the directions I myself will overlook the fact that the reader has no right to criticize, unless, of course, he happens to be a professional bridge builder himself.

It has always seemed to me that the most difficult part of building a bridge would be the start. What does a man do first when he sets out to build a bridge? Granted he has his plans all drawn up and enough food and drink to last him a month. He is standing on one bank of a river and wants to build a bridge across to the other bank. What is the first thing that he does? (I seem to be asking all the questions.)

I suppose that he takes a shovel and digs a little hole, and has his picture taken doing it. Maybe somebody waves a flag. I have seen photographs of such a ceremony, but they never show what happens next. Frankly, I would be up against it if anyone were to put me on one bank of a river and say: "Build a bridge across to the other bank." I might be able to finish it if someone would start it for me, but as for making the first move, I would be left blushing furiously.

I once heard of a man who was confronted by just this emergency. It had got around somehow that he was an authority on bridgework (as a matter of fact, he was a dentist), and when the people in a neighboring town wanted a bridge built they sent for him. He was an easygoing sort of chap, and after they had given him a big dinner and a good cigar he didn't have the heart to tell them that he really knew nothing about the sort of bridge building that they wanted. He kept meaning to tell them, but they were so

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—From *The Treasurer's Report* by Robert Benchley. Copyright, 1930, by Robert C. Benchley. Published by Harper and Brothers and reprinted by their permission.

nice and evidently had so much confidence in him that he hated to spoil their good time, especially after he had eaten their dinner. So he just sat tight and let things take their course.

Pretty soon he found himself on the left bank of the river, with a brass band huddled around him and a lot of people in frock coats, and after someone had read Lincoln's Gettysburg address he was given a gold shovel and told to go ahead. Fortunately the people didn't stick around and watch him, as they figured out that he might be embarrassed by so many spectators, so he stuck the shovel in the ground and waved good-by to everyone, and then bent over as if he were going to work. As a matter of fact he was in a terrible state of mind.

He looked across at the other bank and tried to figure out how far it was. Then he looked behind him and tried to figure out how far that was. He thought that maybe the thing to do was to go and get the bridge made somewhere else, bring it to this spot, and stick one end of it in the hole he had dug and then swing it around until the other end was over the other bank, but that didn't seem practical. So he sat down and began writing some letters he had been meaning to write for months. Then he started throwing shovels full of dirt into the river, hoping against hope that he might get enough of it piled up on the river bottom to make a kind of bridge in itself, but he couldn't even make it show above the surface in one spot.

Just then a man with a rod and a fish basket happened to stroll by and asked him what he was doing.

"You will just laugh when I tell you," said the bridge builder.

"No, I won't, honestly," said the fisherman.

"Then you don't laugh easily," said the bridge builder. "I'm building a bridge."

"And a very smart thing to be doing, too," replied the fisherman. "One never can have too many bridges." Then he added, "You see, I didn't laugh."

This so endeared him to the bridge builder that he offered the stranger a drink, and one thing led to another until they both were sitting on the river bank talking about old songs they used to sing when they were boys.

"Do you remember one that used to go, 'Hello ma baby, hello ma lady, hello ma ragtime gal'?" asked one.

" 'Send me a kiss by wire, honey, ma heart's on fire?" added the other. "Is that the one you mean?"

"It sure is," said the other. "And then it went, 'If you refuse me, honey, you lose me, then I'll be left alone.' "

" 'So, baby, telephone and tell me I'se your own,' " they both sang in unison.

Well, this sort of thing went on for months and months, until they had exhausted all the old songs they used to know and got to making up new ones. The bridge expert forgot entirely what he was there for and the fisherman had never really known, so he had nothing to forget. People used to come over from the town to see how the bridge was coming on and then would tiptoe away again when they saw the two having such a good time. Finally they got someone else to build the bridge, starting from the other side of the river, and what was the surprise of the original bridge expert one day to look up from his game of cribbage with the fisherman and find that they were directly in the way of the vehicular traffic from a brand new bridge. You may be sure that he joined in the laughter, even though the joke was in a way on him. But he saw the fun of the thing, and that is better than any bridge building. What we need in this world is fewer bridges and more fun.

However, the problem of the bridge expert which has just been cited doesn't do much to help those of us who don't understand how a bridge is built. What we want to know is how the second man that the town got went about the job. He evidently knew something about it, for he got the thing done.

I think that it is all that stuff in the air over the river that puzzles me. I can understand the things they build on the banks all right. You go about building those as you would go about building a house, except, of course, for the windows and front porch. But all those wires and hangings which are suspended from apparently nowhere and yet are strong enough to hold up any number of automobiles and trolley cars that take it into their heads to cross the river. There is something very fishy about those. Who supports them? I don't like the looks of it, frankly.

Of course, I suppose that if I had gone a little further in mathematics in school I would be a little easier in my mind about bridges. There is evidently something beyond plane geometry which I don't know about and which may hold the key to this mystery. Maybe it's in plane geometry. I missed a couple of days when I had a sore throat, and perhaps those are the days when the geometry class took up bridge building. Or it is quite possible that I actually studied it and didn't absorb it. I would say that my absorption point in mathematics was about .007, and I would not be surprised to find out that I had missed the whole point entirely.

However, even though your engineer has it all worked out mathematically on paper, with figures and digits all over the place, I still don't see how they get those wires up there in the air or how the wires are induced to hold things up. I studied physics and I'm no fool. You can't tell me that all that weight isn't pulling down, and my question is, "Down from what?"

I don't mean to be nasty about this thing, or narrow-minded. Neither do I incline to the theory of witchcraft—much. There is a man in India, so they tell me, who throws a rope up in the air and then climbs up it, which is evidently the principle of bridge building. But that man in India is supposed to be a fakir, and, according to some theories, the spectators are hypnotized into thinking they see him climb the rope, whereas he is actually not doing it at all. This would be a good explanation of bridges if it were not for the fact that you can't hypnotize a truck into thinking it is crossing a river.

Of course, the old fashioned covered bridge is easy enough to understand. People could wade right out into those rivers and stick the posts in by hand, or at any rate could get planks long enough to reach across. All that was necessary was to get good planks that would rumble. And, by the way, what has become of the old fashioned rumbling plank? You never hear planks rumbling today as they used to on those old covered bridges. I once spent the night in a farmhouse which I later found out was near a covered bridge. In the middle of the night I heard what I thought was thunder; so I got up and shut the window. The room got very hot in about half an hour, so, hearing no more thunder, I thought that the storm had passed us by, and got up and opened the window again. In about ten minutes there was another rumble; this time very loud. With a bound I was out of bed and had the window down in a jiffy. Then came half an hour of stifling again, with a pronounced odor of burning hay from the mattress. I got up and looked out the window. The stars were shining. So up she came again and I went back to bed after stepping on both my shoes, which were lying upside down by the bed. This went on at intervals of half an hour all night, until I finally overcame my fear of thunderstorms and decided to let the lightning come right in and get into bed with me if it wanted to, rather than shut the window again. I have already given away the point of this story, so I need hardly say that I found out in the morning that it actually had been thunder that I had heard and that the town on the other side of the mountain had had a bad storm all night. The covered bridge, however, could have been responsible for the rumbling if it had wanted to.

This little anecdote, exciting and amusing as it has been for all of us, I am sure, has drawn us quite a long way from the theme of this treatise, which, you will remember, was, "What Sort of Trickery Goes Into the Building of Bridges?" I don't happen to know many bridge engineers, so I am unable to say whether they are tricksters as a class. In fact, the only one that I know built a privately owned toll bridge across a river once, and then found that the township ran a free bridge about half a mile down the river around a bend which he hadn't seen before. So he hung his bridge with Japanese lanterns and limited it to rickshaws and spent his vacations fishing from it.

But, aside from possibly taking on a job for building a pontoon bridge, which I could do if I had enough boats, I am distinctly not in the market for a bridge contract until someone explains the principle of the thing more clearly to me.

I once read of a man who was caught in a hotel fire and broke open one of those glass cases containing what is known as a "fire ax." Then, as he stood there, ax in hand, watching little curls of smoke coming up through the floor, he tried to figure out what to do with the ax. He could chop a hole in the floor and let more fire up, or he could chop a hole in the wall and make a nice draft. Aside from those two courses of action he seemed to be saddled with an ax and that was all. After waving it weakly around his head once or twice, thinking maybe to frighten the fire away, he just stood there, making imaginary chopping motions, until the firemen came and carried him out still asking, "What do I do with this?"

Such will be my dilemma when someone puts a shovel in my hand and says: "How about building a bridge?"

Discussion

Compare this essay with "Stop Those Hiccoughs," pp. 514–515. Why, aside from being longer, is this a more remarkable achievement and a more difficult type to imitate?

MORRIS BISHOP · *The Last Days of Football*

The transformation of football may be traced back to the season of 1947, when Pasty Post, coach of South Dakota Wesleyan, first equipped his quarterback with a radio receiver. The device was merely an aviator's headset, surplus property from the war, which fitted neatly under the quarterback's helmet. Pasty Post claimed that this innovation was necessitated by the inability of his quarterback, Yegg Olsen, to remember, ratiocinate, or even count.

Pasty Post's little idea accounted, at least in part, for the brilliant success of South Dakota Wesleyan that year. It defeated, successively, New Jersey Christian, Weinberg Secretarial, and Our Lady of Sorrows in post-season games that extended the football season almost to Commencement Day.

At the annual coaches' convention, Post's device was bitterly denounced, especially by the coaches of New Jersey Christian, Weinberg Secretarial, and Our Lady of Sorrows. It was, however, upheld by the representatives of the great gas-and-oil companies that owned the football radio rights. For the gas-and-oil companies saw in it an answer to their own problem, one of profound seriousness. They had paid enormous sums for the privilege of broadcasting the games, and a number of the big classics had turned out to be downright dull. One of them, indeed (Death Valley Teachers vs. Dismal Swamp A. and M.), had been nothing but an endless series of ineffectual charges in mid-field for two mortal hours. The broadcast of this encounter had so bored the great radio audience that a number of listeners had actually turned their radios off.

The gas-and-oil companies were, therefore, warmly in favor of an innovation which, they felt, would ensure excitement to their

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listeners. They pointed out that they had too much money invested in football to leave the games entirely to chance. While they would not dream of interfering with the legitimate goals of sport, they had, after all, the right to insist that the performances should have that pace which the great radio audience demands, and which, gentlemen, it has a right to demand. They asked only a little friendly consideration of their problem. They argued that a coach who didn't use Post's device had to communicate with his performers by sending in a substitute with a message. Then, gentlemen, what happens? The timekeeper's whistle blows, the substitute runs out, slaps a player on the back. The slapped player runs off, the whistle blows, the team goes into a new huddle. Meanwhile, the announcer ad-libs about the cheerleaders or the lovely day. These delays are wearisome to the listener, are deplorable from the point of view of dramatic structure, and are contrary to all common sense. In these days of instantaneous communication, etc.

The coaches' convention accepted the courteous recommendations of the gas-and-oil companies as, in fact, orders. The system of coach-to-team radio communication was legalized in the rules for 1948. Meanwhile, to improve American football, the gas-and-oil companies retained some of the most brilliant radio producers and directors to lay out the strategy of the important games. Carefully refraining from prearranging the outcomes, these men labored to make the contests continuously interesting to the millions of listeners whose pleasure they had at heart. They insisted, for instance, that a big game should have a genuine dramatic structure, that it should not, as it too often had in the past, concentrate its interest in the first half and then trail off in a long, dull anticlimax. They made sure that stars who had captured the public affection should have a proper role in the field, and not be allowed to languish on the sidelines through some caprice of the coach. It was arranged that a radio man, in white knickers, should be constantly on the field, ready, after each sensational play, to broadcast a few words by the player involved.

The improvement in broadcast football was immediately noticeable. The season of 1948 was certainly the greatest in football history. But even at that time, it now appears, the seeds of disintegration were being sown.

On New Year's Day, 1949, the greatest game of the season was to be played in the Rose Bowl. The contestants were the Alaska Aggies and Panama Tech. The game was the property of Git-There Gas.

But just an hour before the game was scheduled to begin, both teams were laid low by food poisoning. A pretty problem was thus put up to Git-There Gas. Some fifty million people were sitting at their radios, demanding a play-by-play account of the classic. Git-There Gas could not fail its public. In a hasty conference, it was decided that the game must go on—in a New York radio studio.

Two of the most eminent football strategists in the world were placed opposite each other at a large table, with charts and lists of players before them. An umpire sat at mid-table. By turns, the strategists called their plays and defensive measures. The umpire decided between them—awarded yardage gained or lost, ruled passes complete or incomplete, and from time to time granted a touchdown. The conversation of all three was piped to a second studio, where a famous sports announcer sat before the microphone. The announcer, modulating his celebrated voice to broad amusement, quiet appreciation, agony, exultation, and hysteria, told the world. The sound-effects man used his most effective recordings of college bands, roars of the crowd, comic drunks, screams and moans of ladies epileptic with loyalty.

Never had there been such a football game. The strategists, snarling and sweating, produced plays of astounding subtlety and complication, and defenses that were marvels of brilliant improvisation. The deceptions and devices that long ago they had conceived in moments of midnight clairvoyance were now bodied forth. The umpire imperturbably ruled them successful or unsuccessful. Every now and then, he would maim one of the leading players, and half America would groan in unison. At the end, he ruled the game a tie.

It was obvious from the fan mail that this was the most successful football broadcast of all time, and the directors of Git-There Gas drew the logical conclusion. As far as radio was concerned, there was no reason why college football games—clumsy, amateurish, inartistic, unstructural—should be played at all. On every count, studio football was an improvement. It was decided that for the season of 1949 the enormous bother of reporting actual college games would be eliminated and that all football would originate in the radio studios.

During the 1949 season, most of the football fans stayed at home on Saturday afternoons to listen to the great Git-There Gas series. The colleges, deprived of radio revenue, and with their stadia occupied only by pitiful little bands of college students, were obliged to curtail or abolish their sports programs. A number of the smaller colleges went bankrupt and were forced to close.

When, eventually, all the college athletic associations were disbanded and there were no regularly scheduled football games, the students invented a new game, which came to be called "soft football." It was played everywhere—in abandoned stadia and on vacant lots, and on campus quadrangles between classes—by students dressed in old clothes. Sometimes there were twenty or twenty-five on a side. It was great fun. It was, in fact, the same football that had been played in American colleges in 1870.

Discussion

1. Define satire. Is this selection an effective satire? Why?
2. Point out some especially effective bits of satirical humor. Does the climactic interest built up in the "story" help in the total effect of the satire?
3. How much of the satirical effect derives from the grain of truth in the author's implied criticism of the money element in college football?

Writing

Write a brief theme in which you satirize some feature of contemporary life by exaggeration or by pushing a tendency to an absurd extreme. Like Morris Bishop, imagine an event or situation that would result if you exaggerated the present situation a bit. Some suggested topics are: sports enthusiasm in a small town; high school formals; popularity or beauty contests; quiz programs on the radio or on television; advertising contests in the magazines; the multiplication of advertising "Weeks"; fishing as an increasingly complicated sport; the booster spirit in a city, town, or state; changing styles in automobiles or women's apparel; gadgets to lighten the work of the housewife.

J. FRANK DOBIE · *The Cold-Nosed Hounds*

It is impossible for many people, myself included, to be as liberal towards all kinds of dogs as the old-timer was towards whiskey. "Some of it is better," he said, "but all of it is good." When I go to a city and see bipeds dressed in pants, derby hat, and white gloves leading a poodle by a string, I feel ashamed of myself for belonging to the same species, and am outraged that this poodle-pamperer can vote. He prejudices me against the poodle. I can't call myself a dog man at all; yet a real part of my education was *Beautiful Joe*, classic of all dog books. If I could be a boy again, I would stipulate that our old black mongrel named Joe must be a dog again. Boys and dogs belong to each other like boots and spurs.

Dogs belong to homes in the country as much as coons belong to the land around them. If it is after dark, some pot hound in pursuit of fleas should be thumping an elbow on the front gallery floor as fast as a rivet hammer works. I like to hear any dog howl at the moon. I like to hear a hound trail. I had rather hear a genuine artist—no apology for the word—blow a good hunting horn than listen to any clarinet, bugle, trombone, or flute ever breathed into. I am less of a musician than I am a dog man, yet full of appreciation for some kinds of music and for honest dogs and good dog talk.

Good dog talk is much more than the details of how a dog went up one hill, down a creek, through a fence, over a log, under vines, and on and on until he finally put his cat up a tree. Good dog talk, to me, consists mainly of stories, natural history observations, and delineation of characters of both dogs and men associated with dogs.

II

Jim Ballard belongs among those rememberers who, slaves to neither books nor business, go on down the years sipping with

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— From *The Atlantic Monthly*, January, 1944. Copyright, 1944, by *The Atlantic Monthly* and reprinted by their permission and that of J. Frank Dobie.

a fine gusto the flavorsome experiences of the past. Because of the power and joy of remembering what's interesting and good, at the same time paying no mind to what's drab and dull, Jim Ballard and his rare kind live not only their lives but, in a way, the lives of their ancestors. For instance, flour was plentiful before he was born, but Jim Ballard recalls through his grandmother Hallett, dead long ago, how because of their rarity—they were a Sunday treat—biscuits were called "Billy Seldom," whereas unvarying corn bread was called "Johnny Constant."

Jim Ballard, without ever having been what you'd call "a fool about a dog," has had plenty of experiences with them and with dog men. He's a whittler from 'way back, and while whittling red cedar on his front gallery here in Beeville, he's been remembering dogs, and men of dogs, for me.

His father, W. P. Ballard,—Pal Ballard, "Pal" being short for Palestine,—had sixty long-eared hounds that he kept to run deer with out of the Devil's Pocket on the Navidad River, out of Tiger's Bend and other bottom thickets. In early days, as the old-timers tell, deer used to run like antelopes on Golden Rod Prairie, between the Navidad and Lavaca rivers, but fifty years or more ago most of them in that part of Texas had taken to the thickets.

Pal Ballard was sheriff, and the finest piece of furniture in his house was a gun case. He had a hunting horn that he could make sound for miles. He didn't keep but about twenty hounds around his home at Hallettsville, and these he fed mostly on corn bread. The other forty dogs he left in good hands over the country. He had many friends, and sometimes on an organized deer hunt he would scatter them at stands by the dozen.

Jim Ballard considers Jeff Porter's pair of cold-nosed hounds as probably the most remarkable dogs that ever ran in Southern Texas. Jeff Porter imported them to his ranch on the San Antonio River years ago. A cold-nosed dog is a dog that can follow a cold trail. These two that Jeff Porter brought in and trained got so that hardly any trail was too old and cold for them to follow. They would snuff the cobwebs out of some coon's trail, warm it up with their breath, and follow it.

Jeff Porter was mighty proud of them, understood their voices as if they were talking to him in Mexican or English, and had absolute confidence in their abilities.

III

Late one fall he invited his friend Jim Borroum to come over for a coon hunt. The dew had fallen, and maybe it was ten o'clock that night when the two ranchers stopped and made a fire. Bowie and Bonham—those were the names of the two cold-nosed hounds—didn't seem very eager to hunt. They hadn't scented a thing so far. Now, for a brief time, they tarried with the men.

Directly, Bowie sat on his haunches and let out one of those long, long lonesome howls that seem to go up to the remotest nebulae of the Milky Way and back through the ages to the night when sorrow became a companion of man. Bowie howled and Bonham howled after him, and their howls awakened memories in Jeff Porter and Jim Borroum that actually brought tears. If you have never heard that longest and lonesomest of all l-o-n-g, l-o-n-e-s-o-m-e hound howls, you cannot conceive its effects. This night the howls of Jeff Porter's cold-nosed hounds made the leaves on a knock-away tree close to them flutter and fall; actually they nearly covered Bowie up.

Then the dogs set out to hunt. After they took off, Jeff Porter boiled a can of coffee. He and Jim Borroum smoked, heard the first sand-hill cranes flying south, talked about the way wild turkeys hold a strutting party, and felt better.

Then a sound that comes to a hunter like the break of dawn of the Promised Day galloped over the air.

"Listen," Jeff Porter said, raising his hand. "That's Bowie, and he's struck a trail sure as shooting. . . . He's working it. Listen. Now he's on the royal highway and headed fer the throne. Amazing grace! Jest listen!"

It did sound as if Bowie was going home. And then, away over to the right, the other hound opened up.

"That's Bonham, and he's hit another trail," Jeff Porter announced. "It's cold, but wait and he'll warm it up. . . . Listen. . . . Listen. Now that coon ain't got no more chance of hiding himself than the North Star has on a clear night."

For an hour or so the hunters listened to the bayings of the hounds coming over the almost frosty air. "By ganny, the trails are going to cross," Jeff Porter said. "By ganny, they have crossed. Now Bonham's on the right of Bowie."

The men put some more dry mesquite limbs on the fire and waited, always listening. "Derned if the trails ain't coming back together," Jeff Porter said. "Yes, sir, they're nearly side by side now and still going. Let's ride."

They rode, but not so fast that they could not continue to enjoy the hound music. After a long gallop Jeff Porter pulled up. "By ganny," he said, "they're barking treed."

"Sounds that way," Jim Borroum agreed.

"Yes, sir, treed, and two coons from two different directions climbing into the same tree at the same time. That is peculiar."

A full moon was overhead and the first light of dawn was in the sky when the hunters came up to the dogs, now only intermittently barking. They seemed to be interested in a dead live-oak tree—dead so long that its bark had fallen away, leaving the trunk and a few stubby limbs bleached and bare. It stood apart, in clear ground, not far from a motte of timber.

"Now listen, Jeff," Jim Borroum said, "you don't mean to tell me that those fine dogs you been talking about are barking up that old dead tree. Why, who in the nation ever heard of a coon going up a dead tree?"

"Yes, a coon wants cover and I've never seen one take to anything but a tree with leaves and moss on it," Jeff Porter admitted. "But when Bowie and Bonham tell me something, I know it's true, and all your laws about coons can just be blowed."

About this time Bowie reached his forepaws up on the trunk of the dead oak and gave a few scratches. Then Bonham did the same thing.

"Coons in that tree, shore," Jeff Porter yelled.

"Jest as well talk about razorback hogs smelling honeysuckle when they could be picking up acorns," Jim Borroum answered. "Look. You can see for yourself all the coons there are in this tree."

By now Porter was off his horse. "Help me pull off my boots," he said. "I'm going to skin up and show you something."

He climbed to a fork. "Here's the hollow they went into," he yelled.

He lit a match and held it in the opening. "Pitch me up some old dry moss," he requested. After he got it and made a good light, he reported, "Hollow ain't deep at all. I can reach to the bottom of it. Look out, the coons are coming down."

He hauled out the bleached skeletons of two grown coons and dropped them at the feet of his friend. After he had descended and put his boots back on, he said, "I'll still admit that coons won't take up a dead tree, but this tree was not dead and them coons weren't dead neither when they clumb it. I told you Bowie and Bonham were the best cold-nosed hounds that ever worked a cold trail."

They were smart dogs, too. When they got too full of fleas, they used to each bite up a wad of Spanish moss, jump into the San Antonio River, and swim against the current, gradually sinking lower and lower into the water until nothing but the tips of their noses and the moss remained above it. The fleas would retreat from the water, and when they had taken refuge in the moss the dogs would let go.

IV

Bowie and Bonham probably had just a little of the edge on Lindy as respects trailing, but they were not so smart. He was a Walker hound, straight from Mr. Walker's own kennels. Jim Laudermilk, who is an automobile mechanic in Beeville, imported him back in the good days before the government trappers caught out most of the coyotes, ruined hunting, increased the jack rabbit and rat pests, and did nobody any good except themselves. Laudermilk used to take Lindy out alone and chase down many a coyote. He wouldn't let Lindy work with other dogs. He said in the first place Lindy would not work with them, he'd simply work ahead of them; in the second place, his superiority would make the owners of the other dogs feel bad.

About the time that Lindy reached the zenith of his powers and fame, a certain coyote of the region was also coming into fame. His reputation spread far beyond his range, though it was pretty wide. He was known as "the Graveyard Wolf," from his habit of always passing, before the chase was over, around or near the old graveyard east of Beeville. His home seemed to be along the Medio Creek, but no matter where the dogs started him up, he would work around to the graveyard before the night was over. All the dogs in the country had chased the Graveyard Wolf, and always he got away. Packs were brought in from other places; the Graveyard Wolf made fools of them all.

Finally, Jim Laudermilk agreed to let Lindy run the noted coyote, provided no other dog was turned loose in the field. He was a wonderful trailer, but the Graveyard Wolf was so full of brass that any cur could pick up his trail. Out close to the Medio, Lindy picked it up. His owner had permitted several hunters to come along to watch the hound work.

After they heard Lindy open up, they went back close to the graveyard to await developments. It wasn't an hour before they heard Lindy coming. Then he did a remarkable thing. When he got up close to the ground from which the wolf habitually made his getaway, he stopped, howled a lone howl or two, and started back the way he had come.

Jim Laudermilk at first seemed sort of embarrassed. Then he caught on to the hound's sagacity. "Just be patient," he said. "Just give Lindy time."

The other hunters, tired of what appeared to them nothing but nonsense on the part of both dog and man, were going in when Laudermilk explained.

Lindy had realized that he was not cunning enough to catch up with the Graveyard Wolf. Now he was back-tracking to catch him as a pup coming up. And—he actually caught the pup, though it took him thirty-six hours to do it.

EDWIN CORLE · *The Ghost of Billy the Kid*

The Ghost of Billy the Kid haunts the Panamint country north of the Slate Range. Of course it is all nonsense because nobody believes in ghosts and Billy the Kid was never in California. But the rumor started and it continues to persist as rumors will.

Billy the Kid, since his death at the age of twenty-one, and his record of chivalry and deadliness (twenty-one men sent to eternity by this youth not counting Mexicans and Indians) has be-

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—From *Mojave* by Edwin Corle, published by the Liveright Publishing Corporation, New York. Copyright, 1934, Edwin Corle.

come the Robin Hood of New Mexico. The boy must have had charm and generosity and loyalty, for he has become something of a folk-hero in the half century since his death at the hand of Sheriff Pat Garrett in the Maxwell House at Old Fort Sumner in the early eighteen-eighties. But he also had a cold eye and a lightning trigger finger that allowed him to empty with accuracy a six-shooter a split second sooner than any other man in the southwest.

This gift gave Billy a great start in New Mexican history. Several stories of his life have been in print and the more salient facts such as his first killing, the Lincoln County War, the meeting with Governor Lew Wallace, the sensational jail-break in Lincoln, and his final rendezvous with death in that fatal meeting with Pat Garrett when, for the first time in his life, Billy spoke first and shot later—all are pretty generally known.

After the Kid's death there were several absurd rumors to the effect that he had escaped to Mexico, that he was living in disguise in the Pecos Valley, and that he had fled to Arizona. All of these were absolutely groundless and it is an established fact that Billy the Kid is buried at the abandoned military burying ground at old Fort Sumner. The old military post was trail's end for Billy, and any further account of his life is sheer fiction and the embroidery of imaginative minds. What, then, of this ghost of Billy the Kid who lives in the Panamint Valley? Is it all a wild yarn with no truth to back it up? Yes, it's a wild yarn, but yet . . . ?

In one of the half deserted mining towns lives an old man whose only name seems to be "The Kid," but whose initials are W.B. And as every one knows who has been interested in the real Billy, his legitimate name was William Bonney.

This old man is close to eighty and his mind is not as coherent as it might be. His speech rambles. He has a white beard and blue eyes. He is only about five feet eight inches tall and he has very small hands. Those hands are no longer steady, but in spite of that fact he can whip out a six-shooter and put six bullets in a target with astounding speed and accuracy. He won't tell any one his name, but insists that he has been "The Kid" for eighty years, and "The Kid" he intends to remain. He never mentions Billy the Kid, and never plays upon the idea that he was ever William Bonney. When asked if he has ever visited New Mexico, he says yes, but as it was almost sixty years ago, it seems like another life to him.

When asked what he did in New Mexico, The Kid replies that he roamed around, and punched cattle, and worked for some of the big cattle men of the time. And he always adds, "And I learned how to handle a gun." But at the mention of the Lincoln County War, and Murphy and McSween and Governor Lew Wallace, he says nothing.

It is possible, however, to get this old man to admit that he has been outside the law several times in his life. But he will never be specific about it, and the most he ever says about New Mexico is that "life was pretty fast there in the old days."

Only a few people have associated this Panamint Valley Kid with Billy the Kid, and one of the more curious deliberately mentioned the name of Bob Ollinger to him. Now Bob Ollinger was a bad man of the eighteen-eighties and he wanted everybody to know it. He wasn't in trouble with the law but he went around with the proverbial chip way out on the edge of his shoulder. He liked to be considered dangerous. Of course such a man was naïve and even childish. Billy the Kid had none of the theatrical desperado about him. He had nothing but scorn for Ollinger. And it so happened that when Billy the Kid was in jail in Lincoln under sentence to be hung, Ollinger and a man named Bell, were his guards. Bell was a decent sort, but Ollinger, who hated The Kid because he was jealous of his reputation, loved to irritate him and to talk about the approaching hanging. Ollinger must have had a sadistic streak, for he kept rubbing it into The Kid about his imminent death on the gallows, and how few days of life were remaining to him, and how he would dance in the air, and how the rope would choke the rotten life out of him, and how his body would stiffen, and how he himself would put a load of buckshot into the remains of The Kid if he had half a chance.

All that sort of thing must have made Billy writhe, but he said little or nothing in reply. But if he said nothing, he did plenty. A few days before the date of the hanging Ollinger was eating his dinner across the street from the jail in Lincoln. That left The Kid with the remaining guard, Bell. There has been much speculation as to how it was done, and some authorities romantically visualize it as over a card game, but by whatever means possible, Billy managed to get Bell's revolver. That was a costly mistake for Bell, and not being shrewd enough to placate The Kid, who bore him no personal malice, he tried to dash out of the room. The Kid, naturally enough, shot him through the heart.

Ollinger, finishing his meal across the street, gulped the remains of a cup of coffee, and went running back to the jail. The room in which The Kid had been confined was the second story of the old court house. And as Ollinger came lumbering across the street, a quiet, "Hello, Bob," stopped him in his tracks. He looked up at the second story window and saw The Kid smiling down at him with a smile that had little good humor in it. And that's the last thing he ever saw.

Every one in Lincoln knew the desperado was loose, and no one dared do anything about it. Billy the Kid took the county clerk's horse and rode out of town never to return. The entire episode was perhaps the most sensational jail break in the history of New Mexico, and certainly a high spot in the vivid escapades of The Kid.

Now if this old man living alone in the Panamint country were the real Billy, the entire Ollinger episode must have remained forever in his memory. So, of course, must his experiences with Sheriff Pat Garrett. But whenever Garrett's name is mentioned the old man fails to express any kind of an emotion or even recognition of the name. It is a discouraging test for any one who romantically hopes that he has stumbled upon the ghost of a bad man, or who wants to believe that this old man may have been Billy the Kid. And that is just as it should be. For he cannot be the real Billy if the real Billy died over fifty years ago at old Fort Sumner.

But to return to the incident of Bob Ollinger. Apparently only one man ever mentioned Ollinger to this Panamint Valley Kid, and he got a reaction. The old man was sitting in the shade of his little shack which was on a slight rise of ground overlooking a dry wash. He and the stranger were making small talk of sidewinders and gila monsters. Leading the conversation to reptiles in general, the stranger casually said:

"I knew a rattlesnake once whose name was Bob Ollinger. Ever hear of him?"

The old man stared at the distant mountains, and very slowly he began to smile. It was a cool and deliberate and extremely satisfied smile. He picked up a revolver that he had been toying with in his lap.

"Now he comes out of the hotel onto the porch," he remarked.

"He's lookin' around to see where that first shot came from. He's wipin' the coffee off his mouth with one hand, and he trots across the street toward the jail. Now he's half way. Now he's right there where that tin can is settin'."

The stranger didn't say a word. He held his breath while the old man leveled the revolver at a tin can twenty feet away. The old man's hand was steady and his face had a cold, mirthless smile.

"Hello, Bob," he said softly with a slight drawl.

Then he fired and the tin can gave six spasmodic jumps along the ground as six bullets went through it.

"And take that to hell with you," he said, and he put the revolver down beside him.

Then both men were quiet, and the stranger didn't know what to say. But presently the old man scratched the back of his neck.

"Ollinger, did you say?" He was looking blank and the smile was gone. "Ollinger, eh? Nope. Don't recollect that I ever heard of him."

Discussion

1. How much local Panamint, California, history and tradition does the selection contain, and how much of the biography of Billy the Kid?
2. Does any part of this selection seem to be pure invention, that is, fiction? What part or parts?
3. Point out passages in which Corle deliberately persuades the reader that W. B. is Billy the Kid, only to squelch the idea.
4. Have similar rumors about notorious people ever been current?

SALLY BENSON · *Little Woman*

Penny Loomis liked to look back to the day when Ralph had first seen her. It was the day she had first seen Ralph, too, but she didn't think of that. She remembered only the delighted, in-

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credulous look in Ralph's eyes when he caught sight of her sitting in the large wing chair in the Matsons' living room. In the short skirts and long waists of ten years ago, she had seemed just like a doll. Later in the evening he had told her so. "I can't get over you!" he exclaimed. "You're so tiny!"

"Oh, I know! And I hate it!" she answered. "It's dreadful, really! About clothes, I mean. Why, I wear size eleven!"

"You could look taller," Louise Matson said. "Naturally, those flat-heeled shoes make you look awfully little. If you *wanted* to look taller, you could wear high heels."

Penny Loomis had surveyed her strapped, patent-leather shoes thoughtfully and then her eyes had rested for a rather long instant on Louise's substantial Size 7 brocade slippers. "It's all very well for you to talk," she replied ruefully. "Your feet are a decent size, not disgraceful little Chinese feet like mine. You have nice, big feet."

Taking her home that night, Ralph had commented on Louise's attitude. "She was just trying to be catty," he said. "And you were swell about it. You may be little, but you aren't *small!*"

There was nothing to it after that first evening. It was as though Ralph never knew what hit him. There were three months of being engaged, of dancing night after night, attracting attention because Ralph was so tall—over six feet—and she was so tiny. He was enchanted with her daintiness and made jokes about it. "Now where," he would ask, looking over her head and pretending he couldn't see her, "did I put that woman I had with me?"

Everybody would laugh, especially Penny. "Big silly!" she would say. "Take me home!"

Everything she did pleased and amazed him. When, the Christmas before they were married, she presented him with a scarf she had knitted, he was genuinely overwhelmed. "I don't believe it," he said, smoothing it over and over with his hands. "You're not big enough to hold the needles."

He made so much fuss about the scarf at home that his mother, who had knitted scarves, sweaters, and socks for him all his life, was inclined to be bitter. "You act as though she'd knitted that scarf with her feet," she said acidly. "And, by the way, I put those golf stockings I just finished for you in your bottom bureau drawer."

His enchantment lasted long after they were married. It amused him to see her childish, round-toed shoes lying on the floor, to see her diminutive dresses hanging in the closet. Their house was full of company, too, those first months, men mostly, who marvelled with Ralph at the sight of Penny in an apron actually being able to get dinner, carrying platters of food almost bigger than she was.

They had no children, which was a pity, as Penny had fancied the idea of herself surrounded by tall, stalwart sons, but she had Ralph to flutter over and take care of. She made few friends and was content in their small apartment. Once Ralph asked her why she didn't go out more. "Do you good," he said, "to get out and play bridge or something in the afternoon. Why don't you look up Louise? You and she used to be pretty good friends."

Penny replied scornfully. Women were all right, she supposed. But she hated bridge, really. It was such a silly game. And she felt so funny going out with Louise, who was so tall. They looked ridiculous walking together.

Ralph had laughed at that. "Say, listen," he said, "I'm taller than Louise."

"You are a man," she answered. "Men are supposed to be big."

She looked so little and so pretty that Ralph agreed with her. "Louise is kind of a horse," he said.

They spent their vacations in Canada, where Ralph liked to fish. And Penny, dressed enchantingly in boy's denim trousers, checked shirt, and felt hat, lounged against cushions in the canoe while he paddled. She would scream a little, hiding her head, as he took the fish off the hooks. When they walked, Ralph carried her over the rough spots and took her arm up the hills, so that finally, although he insisted she was no trouble, he took to fishing nearer the Lodge.

Sometimes he was surprised at the number of things a man who was married to a little thing like Penny had to think of. There was the question of theatre tickets, for instance; he had to make an effort to get seats in the first row so that Penny wouldn't have to crane her neck or sit on her coat to see the stage; he must also remember to shorten his steps when they walked together or Penny got tired and out of breath; things must be left where Penny could reach them without having to stand on a chair.

Once he had spoken to her about it. "Gosh," he said, "it is kind of tough to be as little as you are! I never thought how it must be for you, not being able to do things that other people do."

The instant the words were out of his mouth, he knew he had said the wrong thing. "I'd like to know what I can't do that other women can!" she told him indignantly. "I think I manage to keep busy!"

He had to admit she did keep busy. In fact, she was never still. She was as busy, he thought, as a canary in a cage, fluttering, picking, keeping up an incessant chirping. "Sure you keep busy," he said. "Busy as a bird."

When they had been married almost ten years, he went on a business trip to Chicago. The thought of being left all alone frightened Penny and she made a great deal of it. He must put a chain lock on the front door and write down where he would be every night so that she could call him in case anything happened. Her anxious fluttering depressed him, and his depression lasted until he was safely on the train and seated in the warm, noisy dining car.

His second night in Chicago, the man he had come to see, a Mr. Merrick, asked him out for dinner. Mrs. Merrick went with them. She was a plain-looking woman, a little too stout, but there was something pleasing in the monotony of her solid brown hair that had no disturbing highlights, in her soft, friendly brown eyes and her uninteresting brown felt hat. She had the appearance of a woman who had contemplatively set aside all personal vanity and turned to other things.

Ralph was surprised to find himself having a rather hilarious evening with them, and delighted to learn that Mr. Merrick had about decided to go back to New York with him and wind up their business for good and all. "And take me," Mrs. Merrick said.

"Oh, sure, take you," Mr. Merrick agreed.

And Ralph had added, "You bet!"

That night at the hotel, he wrote to Penny. It was a long, enthusiastic letter, and he wrote everything he could think of to please her. "They asked all about you," he wrote. "And I told them you were no bigger than a minute and as pretty as a picture.

So we'll take them to dinner, when I get back, which should be about Friday. I'll wire exactly when. I miss you."

As he wrote "I miss you," he stopped and put his pen down on the desk. It struck him that he hadn't missed Penny at all, while she—well, he supposed that she was rattling around in the apartment not knowing what to do with herself. It occurred to him that she ought to have something to do, something better than fussing around with things at home. Not that he wanted her to work, he thought. Penny was far too helpless and little to be able to cope with a job. His heart softened when he remembered their evenings together with Penny curled up on his lap as he sat in the big chair, talking to him a mile a minute in her rather high, clear voice. He was ashamed of the many times he had wished she would read more, and recalled one dreadful evening when he had looked up from his paper at the sound of her nervous wandering about the room to say, "For the love of Pete, *light*, can't you?"

Thinking of these things and of the fine evening he had had with the Merricks, he picked up his pen again and underlined "I miss you."

The trip back to New York with the Merricks was great, but Penny was not at the station to meet him. "Unless we've missed her," he said gaily. "She's so darned little, she's easy to miss."

He assured the Merricks that he would just dash home, change his clothes, pick up Penny, and meet them at their hotel.

Penny was waiting for him at home. She was almost hysterically glad to see him, and he noticed that the house was shining and spotless, with fresh flowers in the vases and a wood fire burning in the grate. She was already dressed for the evening in a pale-pink taffeta dress with many ruffles, and stubby satin shoes tied with large bows. She wore a ribbon around her hair, and in the shaded lights of the living room she looked very young. It was only when she followed him to the bathroom to talk to him while he shaved that he noticed her more closely; the line of her mouth, always too thin, looked set and unhappy; the skin on her face looked drawn; and there was more than a sprinkling of gray in her black hair. The pink taffeta dress looked suddenly absurd on her, and he wished that she had worn something more suitable, something more her age. Why, Penny must be thirty-five!

She was curious about the Merricks, she said. "I never heard you make so much fuss over any two people in my life. What's she like?"

"Mrs. Merrick?" he asked, struggling with his stiff white shirt. "Oh, she's darned nice."

"Oh, I *know* that," Penny answered impatiently. "I know you think she's nice. What does she look like? Is she pretty?"

"No," he told her. "You couldn't call her pretty."

"Well, is she big, little, fat, thin?"

"She's not little," he said. "Why, she'd make two of you."

This seemed to satisfy her and she asked no more about the Merricks.

At the hotel they were told that Mr. and Mrs. Merrick were waiting for them in the main dining room. Walking through the lobby and down the long corridor, Penny was pleasantly conscious of the stir they created. She even shortened her steps a little, so that she appeared to be keeping up with Ralph by tripping at his side.

Mrs. Merrick's first words to her were what she expected. "Why, you're tiny!"

Penny laughed sweetly and looked up at Ralph. "Yes, isn't it silly?" she said. "I must look perfectly absurd beside Ralph, who is so enormous."

Mrs. Merrick's eyes took in every detail of Penny, her dress, her shoes, and the ribbon around her hair, and then she said, in almost the exact words that Louise had used so many years ago, "Do you know, with heels you'd look much taller. Why, you must be five feet one or so, and with good, high heels you'd look three inches taller! That would make you five feet four, which is a nice height. A great many movie actresses are five feet four."

Penny laughed again, but she flushed slightly.

"Now, Nellie," Mr. Merrick said, "don't go to making people over the first minute you see them. Maybe Mrs. Loomis *likes* to look small."

"Nonsense!" Mrs. Merrick exclaimed heartily. "No one wants to look like a midget! That is, no one wants to look *too* different. I know I was awfully tall for my age when I was about fifteen and I felt terribly about it. I was a sight, I can tell you."

And you're a sight now, Penny thought furiously. She chose a seat next to Mrs. Merrick and during dinner she rested her small, thin hand next to Mrs. Merrick's large, square one. She picked at her food daintily and exclaimed pleasantly when the other woman ordered ice cream with chocolate sauce for dessert. "Not that I wouldn't love it, but I just haven't *room,*" she said.

Later, when the music started, she was surprised to see Ralph spring eagerly to his feet and ask Mrs. Merrick to dance.

"I haven't danced much lately," he said. "But let's go!"

He put one arm around Mrs. Merrick's waist and they started off. It was pleasant to have her face so near his own, to feel her soft, straight hair brush his forehead. She wore a dark-brown velvet dress, not very new and not very smart, but she had dignity and she moved smoothly with him across the dance floor. Over her shoulder he saw Penny dancing with Mr. Merrick. She was looking up into his face and talking brightly and animatedly. Mr. Merrick was bending down to catch what she was saying, smiling a frozen sort of smile, but he didn't look very happy.

The rest of the evening was not especially successful. Ralph tried in vain to recapture the spirit of hilarity he had felt with the Merricks in Chicago. But there was a sort of uneasiness in the air, even though Penny showed them several match tricks.

He was a little relieved, as they said good night, to learn that the Merricks had bought theatre tickets for the following evening and were leaving the day after for Chicago.

All the way home, Ralph sat in one corner of the taxi watching Penny as she talked. Her head was bent slightly to one side in the birdlike way she affected, and the white street lights flashing through the window were not kind to her. As he looked at her, she seemed to grow smaller and smaller until there was nothing much left of her but a pink taffeta dress and a pink ribbon. It had started to rain and the drops on the glass cast black dots on the pink taffeta dress, and he had the impression that it, too, might eventually disappear.

He did not notice that the cab had stopped in front of their apartment until Penny's voice gaily brought him back to earth. It was habit that made him pick her up and carry her across the wet, slippery pavement. And for such a little woman, she felt surprisingly heavy in his arms.

Discussion

1. Can this selection be called a character sketch in the form of a story? Can the same be said of "The Erne from the Coast," pp. 557–570? Explain.
2. Why is the second sentence of the story a very telling and very clever one?
3. What remarks to Penny serve to start and to round off our idea of Penny?
4. Point to things that Penny says and does that reveal her character. How does the author make it clear that Penny trades upon her tininess? How do other characters help to reveal what she is like?
5. Contrast Penny and Mrs. Merrick.
6. Characterize Ralph.

STEPHEN CRANE · *A Dark Brown Dog*

A child was standing on a street-corner. He leaned with one shoulder against a high board fence and swayed the other to and fro, the while kicking carelessly at the gravel.

Sunshine beat upon the cobbles, and a lazy summer wind raised yellow dust which trailed in clouds down the avenue. Clattering trucks moved with indistinctness through it. The child stood dreamily gazing.

After a time, a little dark-brown dog came trotting with an intent air down the sidewalk. A short rope was dragging from his neck. Occasionally he trod upon the end of it and stumbled.

He stopped opposite the child, and the two regarded each other. The dog hesitated for a moment, but presently he made some little advances with his tail. The child put out his hand and called him. In an apologetic manner the dog came close, and the two had an interchange of friendly pattings and waggles. The dog became more enthusiastic with each moment of the interview, until with his gleeful caperings he threatened to overturn the child. Where-

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upon the child lifted his hand and struck the dog a blow upon the head.

This thing seemed to overpower and astonish the little dark-brown dog, and wounded him to the heart. He sank down in despair at the child's feet. When the blow was repeated, together with an admonition in childish sentences, he turned over upon his back, and held his paws in a peculiar manner. At the same time with his ears and his eyes he offered a small prayer to the child.

He looked so comical on his back, and holding his paws peculiarly, that the child was greatly amused and gave him little taps repeatedly, to keep him so. But the little dark-brown dog took this chastisement in the most serious way, and no doubt considered that he had committed some grave crime, for he wriggled contritely and showed his repentance in every way that was in his power. He pleaded with the child and petitioned him, and offered more prayers.

At last the child grew weary of this amusement and turned toward home. The dog was praying at the time. He lay on his back and turned his eyes upon the retreating form.

Presently he struggled to his feet and started after the child. The latter wandered in a perfunctory way toward his home, stopping at times to investigate various matters. During one of these pauses he discovered the little dark-brown dog who was following him with the air of a footpad.

The child beat his pursuer with a small stick he had found. The dog lay down and prayed until the child had finished, and resumed his journey. Then he scrambled erect and took up the pursuit again.

On the way to his home the child turned many times and beat the dog, proclaiming with childish gestures that he held him in contempt as an unimportant dog, with no value save for a moment. For being this quality of animal the dog apologized and eloquently expressed regret, but he continued stealthily to follow the child. His manner grew so very guilty that he slunk like an assassin.

When the child reached his doorstep, the dog was industriously ambling a few yards in the rear. He became so agitated with shame when he again confronted the child that he forgot the dragging rope. He tripped upon it and fell forward.

The child sat down on the step and the two had another interview. During it the dog greatly exerted himself to please the child. He performed a few gambols with such abandon that the child suddenly saw him to be a valuable thing. He made a swift, avaricious charge and seized the rope.

He dragged his captive into a hall and up many long stairways in a dark tenement. The dog made willing efforts, but he could not hobble very skilfully up the stairs because he was very small and soft, and at last the pace of the engrossed child grew so energetic that the dog became panic-stricken. In his mind he was being dragged toward a grim unknown. His eyes grew wild with the terror of it. He began to wiggle his head frantically and to brace his legs.

The child redoubled his exertions. They had a battle on the stairs. The child was victorious because he was completely absorbed in his purpose, and because the dog was very small. He dragged his acquirement to the door of his home, and finally with triumph across the threshold.

No one was in. The child sat down on the floor and made overtures to the dog. These the dog instantly accepted. He beamed with affection upon his new friend. In a short time they were firm and abiding comrades.

When the child's family appeared, they made a great row. The dog was examined and commented upon and called names. Scorn was leveled at him from all eyes, so that he became much embarrassed and drooped like a scorched plant. But the child went sturdily to the center of the floor, and, at the top of his voice, championed the dog. It happened that he was roaring protestations, with his arms clasped about the dog's neck, when the father of the family came in from work.

The parent demanded to know what the blazes they were making the kid howl for. It was explained in many words that the infernal kid wanted to introduce a disreputable dog into the family.

A family council was held. On this depended the dog's fate, but he in no way heeded, being busily engaged in chewing the end of the child's dress.

The affair was quickly ended. The father of the family, it appears, was in a particularly savage temper that evening, and when he perceived that it would amaze and anger everybody if such a dog were allowed to remain, he decided that it should be so. The child, crying softly, took his friend off to a retired part of the room to hobnob with him, while the father quelled a fierce rebellion of his wife. So it came to pass that the dog was a member of the household.

He and the child were associated together at all times save when the child slept. The child became a guardian and a friend. If the large folk kicked the dog and threw things at him, the child made loud and violent objections. Once when the child had run, protesting loudly, with tears raining down his face and his arms outstretched, to protect his friend, he had been struck in the head with a very large saucepan from the hand of his father, enraged at some seeming lack of courtesy in the dog. Ever after, the family were careful how they threw things at the dog. Moreover, the latter grew very skilful in avoiding missiles and feet. In a small room containing a stove, a table, a bureau and some chairs, he would display strategic ability of a high order, dodging, feinting, and scuttling about among the furniture. He could force three or four people armed with brooms, sticks, and handfuls of coal, to use all their ingenuity to get in a blow. And even when they did, it was seldom that they could do him a serious injury or leave any imprint.

But when the child was present these scenes did not occur. It came to be recognized that if the dog was molested, the child would burst into sobs, and as the child, when started, was very riotous and practically unquenchable, the dog had therein a safeguard.

However, the child could not always be near. At night, when he was asleep, his dark-brown friend would raise from some black corner a wild, wailful cry, a song of infinite loneliness and despair, that would go shuddering and sobbing among the buildings of the block and cause people to swear. At these times the singer would often be chased all over the kitchen and hit with a great variety of articles.

Sometimes, too, the child himself used to beat the dog, although it is not known that he ever had what truly could be called a just cause. The dog always accepted these thrashings with an air of admitted guilt. He was too much of a dog to try to look to be a martyr or to plot revenge. He received the blows with deep humility, and furthermore he forgave his friend the moment the child had finished, and was ready to caress the child's hand with his little red tongue.

When misfortune came upon the child, and his troubles overwhelmed him, he would often crawl under the table and lay his small distressed head on the dog's back. The dog was ever sympathetic. It is not to be supposed that at such times he took occasion to refer to the unjust beatings his friend, when provoked, had administered to him.

He did not achieve any notable degree of intimacy with the other members of the family. He had no confidence in them, and the fear that he could express at their casual approach often exasperated them exceedingly. They used to gain a certain satisfaction in underfeeding him, but finally his friend the child grew to watch the matter with some care, and when he forgot it, the dog was often successful in secret for himself.

So the dog prospered. He developed a large bark, which came wondrously from such a small rug of a dog. He ceased to howl persistently at night. Sometimes, indeed, in his sleep, he would utter little yells, as from pain, but that occurred, no doubt, when in his dreams he encountered huge flaming dogs who threatened him direfully.

His devotion to the child grew until it was a sublime thing. He wagged at his approach; he sank down in despair at his departure. He could detect the sound of the child's step among all the noises of the neighborhood. It was like a calling voice to him.

The scene of their companionship was a kingdom governed by this terrible potentate, the child; but neither criticism nor rebellion ever lived for an instant in the heart of the one subject. Down in the mystic, hidden fields of his little dog-soul bloomed flowers of love and fidelity and perfect faith.

The child was in the habit of going on many expeditions to observe strange things in the vicinity. On these occasions his friend usually jogged aimfully along behind. Perhaps, though, he went ahead. This necessitated his turning around every quarter-minute to make sure the child was coming. He was filled with a large idea of the importance of these journeys. He would carry himself with such an air! He was proud to be the retainer of so great a monarch.

One day, however, the father of the family got quite exceptionally drunk. He came home and held carnival with the cooking utensils, the furniture and his wife. He was in the midst of this recreation when the child, followed by the dark-brown dog, entered the room. They were returning from their voyages.

The child's practised eye instantly noted his father's state. He dived under the table, where experience had taught him was a rather safe place. The dog, lacking skill in such matters, was, of course, unaware of the true condition of affairs. He looked with interested eyes at his friend's sudden dive. He interpreted it to mean: Joyous gambol. He started to patter across the floor to join him. He was the picture of little dark-brown dog en route to a friend.

The head of the family saw him at this moment. He gave a huge howl of joy, and knocked the dog down with a heavy coffee-pot. The dog, yelling in supreme astonishment and fear, writhed to his feet and ran for cover. The man kicked out with a ponderous foot. It caused the dog to swerve as if caught in a tide. A second blow of the coffee-pot laid him upon the floor.

Here the child, uttering loud cries, came valiantly forth like a knight. The father of the family paid no attention to these calls of the child, but advanced with glee upon the dog. Upon being knocked down twice in swift succession, the latter apparently gave up all hope of escape. He rolled over on his back and held his paws in a peculiar manner. At the same time with his eyes and his ears he offered up a small prayer.

But the father was in a mood for having fun, and it occurred to him that it would be a fine thing to throw the dog out of the window. So he reached down and, grabbing the animal by a leg, lifted him, squirming, up. He swung him two or three times hilariously about his head, and then flung him with great accuracy through the window.

The soaring dog created a surprise in the block. A woman watering plants in an opposite window gave an involuntary shout and dropped a flowerpot. A man in another window leaned perilously out to watch the flight of the dog. A woman who had been hanging out clothes in a yard began to caper wildly. Her mouth was filled with clothes-pins, but her arms gave vent to a sort of exclamation. In appearance she was like a gagged prisoner. Children ran whooping.

The dark-brown body crashed in a heap on the roof of a shed five stories below. From thence it rolled to the pavement of an alleyway.

The child in the room far above burst into a long, dirge-like cry, and toddled hastily out of the room. It took him a long time to reach the alley, because his size compelled him to go downstairs backward, one step at a time, and holding with both hands to the step above.

When they came for him later, they found him seated by the body of his dark-brown friend.

Discussion

1. Point out unusually imaginative details of description.
2. Comment on the formality of much of the diction. What effect does Crane seek to achieve by means of such expressions as, ". . . he held him in contempt as an unimportant dog, with no value save for a moment"?
3. List ten or fifteen words that are used primarily for their connotations.
4. Study the final scene, of the dog soaring through the air and the effect it creates on the neighbors. What is the emotional effect on the reader? What details contribute to this effect?
5. Do you find any pathos in the story?
6. Can you show that the author is skilled in presenting a scene briefly?

T. O. BEACHCROFT · *The Erne from the Coast*

"Where's Harry?" Mr. Thorburn came out of the back of the farmhouse. He stood in the middle of the well-kept farmyard. "Here, Harry!" he shouted, "Hi, Harry!"

He stood leaning on a stick and holding a letter in his hand, as he looked round the farmyard.

—From *The Collected Stories of T. O. Beachcroft*, published by the Bodley Head, Ltd., London. First printed in *The Atlantic Monthly*, April, 1938.

Mr. Thorburn was a red-faced, powerful man; he wore knee breeches and black leather gaiters. His face and well-fleshed body told you at a glance that Thorburn's Farm had not done too badly during the twenty years of his married life.

Harry, a fair-haired boy, came running across the yard.

"Harry," said the farmer to his son, "here's a letter come for old Michael. It will be about this visit he's to pay to his sick brother. Nice time of year for this to happen, I must say. You'd better take the letter to him at once."

"Where to?" said Harry.

"He's up on the hill, of course," said the farmer. "In his hut, or with the sheep somewhere. Your own brains could have told you that. Can't you ever use them? Go on, now."

"Right," said Harry. He turned to go.

"Don't take all day," said his father.

Mr. Thorburn stood looking after his son. He leaned heavily on the thorn stick which he always carried. Harry went through the gate in the low gray wall which ran round one side of the yard, where there were no buildings. Directly he left the farmyard, he began to climb. Thorburn's Farm was at the end of a valley. Green fields lay in front of it, and a wide road sloped gently down to the village a mile away; behind, the hill soared up, and high on the ridge of the hill was Michael's hut, three miles off, and climbing all the way.

Harry was thirteen, very yellow-haired and blue-eyed. He was a slip of a boy. It seemed unlikely that he could ever grow into such a stolid, heavy man as his father. Mr. Thorburn was every pound of fourteen stone, as the men on the farm could have told you the day he broke his leg and they had to carry him back to the farmhouse on a hurdle.

Harry started off far too fast, taking the lower slopes almost at a run. His body was loose in its movements, and coltish, and by the time the real work began he was already tiring. However, the April day was fresh and rainy, and the cold of it kept him going. Gray gusts and showers swept over the hillside, and between them, with changing light, came faint gleams of sunshine, so that the shadows of the clouds raced along the hill beside him. Presently he cleared the gorse and heather, and came out on to the open hillside, which was bare except for short, tussocky grass. His home began to look far off beneath him. He could see his mother walking down towards the village with one of the dogs, and the baker's cart coming up from the village towards her. The fields were brown and green round the farmhouse, and the buildings were gray, with low stone walls.

He stopped several times to look back on the small distant farm. It took him well over an hour to reach the small hut where Michael lived by day and slept during most nights throughout the lambing season. He was not in his hut, but after a few minutes' search Harry found him. Michael was sitting without movement, watching the sheep and talking to his gray and white dog. He had a sack across his shoulders, which made him look rather like a rock with gray lichen on it. He looked up at Harry without moving.

"It's a hildy wildy day," he said, "but there'll be a glent of sunsheen yet."

Harry handed Michael the letter. Michael looked at it, and opened it very slowly, and spread the crackling paper out on his knee with brown hands. Harry watched him for some minutes as he studied the letter in silence.

"Letter'll be aboot my brother," said Michael at length. "I'm to goa and see him." He handed the letter to Harry. "Read it, Harry," he said. Harry read the letter to him twice.

"Tell thy dad," said Michael, "I'll be doon at farm i' the morn. Happen I'll be away three days. And tell him new lamb was born last neet, but it's sickly."

They looked at the small white bundle that lay on the grass beside its mother, hardly moving.

" 'T'll pick up," said Michael. He slowly stood and looked round at the distance.

Michael had rather long hair; it was between gray and white in color, and it blew in the wind. It was about the hue of an old sheep's skull that has lain out on the bare mountain. Michael's clothes and face and hair made Harry feel that he had slowly faded out on the hillside. He was all the color of rain on the stones and last year's bracken.

"It'll make a change," said Michael, "going off and sleeping in a bed."

"Good-bye," said Harry. "You'll be down at the farm tomorrow, then?"

"Aw reet," said Michael.

"Aw reet," said Harry.

Harry went slowly back to the farm. The rain had cleared off, and the evening was sunny, with a watery light, by the time he was home. Michael had been right. Harry gave his father the message, and told him about the lamb.

"It's a funny thing," said Harry, "that old Michael can't even read."

"Don't you be so smart," said Mr. Thorburn. "Michael knows a thing or two you don't. You don't want to go muckering about with an old fellow like Michael—best shepherd I've ever known."

Harry went away feeling somewhat abashed. Lately, it seemed his father was always down on him, telling him he showed no sign of sense; telling him he ought to grow up a bit; telling him he was more like seven than thirteen.

He went to the kitchen. This was a big stone-floored room with a huge plain table, where the whole household and several of the farm hands could sit down to dinner or tea at the same time. His mother and his aunt from the village were still lingering over their teacups, but there was no one else in the room except a small tortoise-shell cat, which was pacing round them asking for milk in a loud voice. The yellow evening light filled the room. His mother gave him tea and ham and bread and butter, and he ate it in silence, playing with the cat as he did so.

II

Next morning at nine o'clock there was a loud rap with a stick at the kitchen door, and there by the pump, with the hens running round his legs, stood Michael.

"Good morning, Mrs. Thorburn," he said. "Is Measter about?"

"Come on in with you," said Mrs. Thorburn, "and have a good hot cup o' tea. Have you eaten this morning?"

Michael clanked into the kitchen, his hobnails striking the flags, and he sat down at one end of the table.

"Aye," he said, "I've eaten, Missus. I had a good thoom-bit when I rose up, but a cup of tea would be welcome."

As he drank the tea, Mr. Thorburn came in, bringing Harry with him. Michael, thought Harry, always looked rather strange when he was down in the village or in the farmhouse; rather as a pile of bracken or an armful of leaves would look if it were emptied out onto the parlor floor.

Michael talked to Mr. Thorburn about the sheep; about the new lamb; about young Bob, his nephew, who was coming over from another farm to look after the sheep while he was away.

"Tell en to watch new lamb," said Michael; "it's creachy. I've put en in my little hut, and owd sheep is looking roun' t' doorway."

After his cup of tea Michael shook hands all round. Then he set off down to the village, where he was going to fall in with a lift.

Soon after he had gone, Bob arrived at the farm. He was a tall young man with a freckled face, and red hair, big-boned and very gentle in his voice and movements. He listened to all Mr. Thorburn's instructions and then set out for the shepherd's hut.

However, it seemed that Mr. Thorburn's luck with his shepherds was dead out. For the next evening, just as it was turning dark, Bob walked into the farmhouse kitchen. His face was tense with pain, and he was nursing his left arm with his right hand. Harry saw the ugly distorted shape and swelling at the wrist. Bob had fallen and broken the wrist earlier in the day, and by evening the pain had driven him back.

"I'm sorry, Mr. Thorburn," he kept on saying. "I'm a big fule."

The sheep had to be left for that night. Next morning it was again a cold, windy day, and clouds the color of gunmetal raced over the hill. The sun broke through fitfully, filling the valley with a steel-blue light in which the green grass looked vivid. Mr. Thorburn decided to send Harry out to the shepherd's hut for the day and night.

"Happen old Michael will be back some time tomorrow," he said. "You can look to the sheep, Harry, and see to that sick lamb for us. It's a good chance to make yourself useful."

Harry nodded.

"You can feed the lamb. Bob said it didn't seem to suck enough, and you can let me know if anything else happens. And you can keep an eye on the other lambs and see they don't get over the edges. There's no need to fold them at night; just let the dog round them up and see the flock is near the hut."

"There's blankets and everything in the hut, Harry," said Mrs. Thorburn, "and a spirit lamp to make tea. You can't come to harm."

Harry set off up the hill and began to climb. Out on the hilltop it was very lonely, and the wind was loud and gusty, with sudden snatches of rain. The sheep kept near the wooden hut most of the time; it was built in the lee of the ridge, and the best shelter was to be found near it. Harry looked after the sick lamb and brewed himself tea. He had Tassie, the gray and white sheepdog, for company. Time did not hang heavy. When evening came he rounded up the sheep and counted them, and, true to advice that Michael had given him, he slept in his boots as a true shepherd does, warmly wrapped up in the rugs.

He was awakened as soon as it was light by the dog barking. He went out in the gray dawn light, and found a rustle and agitation among the sheep. Tassie ran to him and back towards the sheep. The sheep were starting up alert, and showed a tendency to scatter. Harry looked round, wondering what the trouble was. Then he saw. A bird was hovering over the flock, and it was this that had attracted the sheep's attention. But what bird was it? It hovered like a hawk, soaring on outstretched wings; yet it was much too big for a hawk. As the bird came nearer Harry was astonished at its size. Once or twice it approached and then went soaring and floating away again. It was larger than any bird he had ever seen before—brownish in color, with a gray head and a hawk's beak.

Suddenly the bird began to drop as a hawk drops. A knot of sheep dashed apart. Tassie rushed towards the bird, his head down and his tail streaming out behind him. Harry followed. This must be an eagle, he thought. He saw it, looking larger still now it was on the ground, standing with outstretched wings over a lamb.

Tassie attacked, snarling in rage. The eagle rose at him. It struck at him with its feet and a flurry of beating wings. The dog was thrown back. He retreated slowly, snarling savagely as he went, his tail between his legs. He was frightened now, and uncertain what to do.

The eagle turned back to the lamb, took it in its talons again, and began to rise. It could not move quickly near the ground, and Harry came up with it. At once the eagle put the lamb on a rock and turned on him. He saw its talons driving towards his face, claws and spurs of steel—a stroke could tear your eyes out. He put up his arms in fear, and he felt the rush of wings round his face. With his arm above his head he sank on one knee.

When he looked up again, the eagle was back on the lamb. It began to fly with long slow wingbeats. At first it scarcely rose, and flew with the lamb almost on the ground.

Harry ran, throwing a stone. He shouted. Tassie gave chase, snapping at the eagle as it went. But the eagle was working towards a chasm, a sheer drop in the hillside where no one could follow it. In another moment it was floating in the air, clear and away. Then it rose higher, and headed towards the coast, which was a few miles away over the hill.

Harry stood and watched it till it was out of sight. When it was gone, he turned and walked slowly back to the hut. There was not a sound to be heard now except the sudden rushes of wind. The hillside was bare and coverless except for the scattered black rocks. Tassie walked beside him. The dog was very subdued and hardly glanced to right or left.

It took some time to round the sheep up, or to find, at least, where the various parts of the flock had scattered themselves. The sick lamb and its mother had been enclosed all this time in a small fold near the hut. The ewe was still terrified.

An hour later Harry set off down the mountain side to the farm. Tassie looked after him doubtfully. He ran several times after him, but Harry sent him back to the hut.

It was the middle of the morning when Harry came back to the farmyard again. His father was standing in the middle of the yard, leaning on his stick, and giving advice to one of his cowmen. He broke off when he saw Harry come in through the gate, and walk towards him across the farmyard.

"Well," he said, "anything wrong, Harry? I thought you were going to stay till Michael came back."

"We've lost a lamb," said Harry, breathlessly. "It's been carried off by an eagle. It must have been an eagle."

"An eagle?" said Mr. Thorburn. He gave a laugh which mocked Harry. "Why didn't you stop it?"

"I tried," said Harry. "But I . . ."

Mr. Thorburn was in a bad mood. He had sold some heifers the day before at a disappointing price. He had had that morning a letter from the builders about repairs to some of the farm buildings, and there was work to be done which he could hardly afford. He was worried about Michael's absence. He felt as if the world were bearing down on him, and he had too many burdens to support.

He suddenly shouted at Harry, and his red face turned darker red.

"That's a lie!" he said. "There's been no eagle here in my lifetime. What's happened? Go on—tell me."

Harry stood before him. He looked at his father, but said nothing.

"You've lost that lamb," said Thorburn. "Let it fall down a hole or something. Any child from the village could have watched those sheep for a day. Then you're frightened, and come back here and lie to me."

Harry still said nothing.

"Come here," said Thorburn suddenly. He caught him by the arm and turned him round. "I'll teach you not to lie to me," he said. He raised his stick and hit Harry as hard as he could; then again and again.

"It's true," began Harry, and then cried out with pain at the blows.

At the third or fourth blow he wrenched himself away. Thorburn let him go. Harry walked away as fast as he could, through the gate and out of the yard without looking round.

"Next time it will be a real beating," his father shouted after him. "Bring the eagle back, and then I'll believe you."

III

As soon as Harry was through the gate, he turned behind one of the barns where he was out of sight from the yard. He stood trembling and clenching his fists. He found there were tears on his face, and he forced himself not to cry. The blows hurt, yet they did not hurt very seriously. He would never have cried for that. But it had been done in front of another man. The other man had looked on, and he and his father had been laughing as he had almost run away. Harry clenched his fists; even now they were still talking about him.

He began to walk and then run up the hillside towards the hut. When he reached it, he was exhausted. He flung himself on the mattress and punched it again and again and clenched his teeth.

The day passed and nobody came from the farm. He began to feel better, and presently a new idea struck him, and with it a new hope. He prayed now that old Michael would not return today; that he would be able to spend another night alone in the hut; and that the eagle would come back next morning and attack the sheep again, and give him one more chance.

Harry went out and scanned the gray sky, and then knelt down on the grass and prayed for the eagle to come. Tassie, the gray and white sheepdog, looked at him questioningly. Soon it was getting dark, and he walked about the hill and rounded up the sheep. He counted the flock, and all was well. Then he looked round for a weapon. There was no gun in the hut, but he found a thick stave tipped with metal, part of some broken tool that had been thrown aside. He poised the stave in his hand and swung it; it was just a good weight to hit with. He would have to go straight at the eagle without hesitation and break its skull. After thinking about this for some time, he made himself tea, and ate some bread and butter and cold meat.

Down at the farm Mr. Thorburn in the evening told his wife what had happened. He was quite sure there had been no eagle. Mrs. Thorburn did not say much, but she said it was an extraordinary thing for Harry to have said. She told her husband that he ought not to have beaten the boy, but should have found out what the trouble really was.

"But I dare say there is no great harm done," she ended, philosophically.

Harry spent a restless night. He slept and lay awake by turns, but, sleeping or waking, he was tortured by the same images. He saw all the events of the day before. He saw how the eagle had first appeared above him; how it had attacked; how it had driven off Tassie and then him. He remembered his fear, and he planned again just how he could attack the eagle when it came back. Then he thought of himself going down towards the farm and he saw again the scene with his father.

All night long he saw these pictures and other scenes from his life. In every one of them he had made some mistake; he had made himself look ridiculous, and grown men had laughed at him. He had failed in strength or in common sense; he was always disappointing himself and his father. He was too young for his age. He was still a baby.

So the night passed. Early in the morning he heard Tassie barking.

He jumped up, fully clothed, and ran outside the hut. The cold air made him shiver; but he saw at once that his prayer had been answered. There was the eagle, above him, and already dropping down towards the sheep. It floated, poised on huge wings. The flock stood nervously huddled. Suddenly, as before, the attacker plunged towards them. They scattered, running in every direction. The eagle followed, and swooped on one weakly running lamb. At once it tried to rise again, but its heavy wingbeats took it along the earth. Near the ground it seemed cumbersome and awkward. Tassie was after it like a flash; Harry seized his weapon, the stave tipped with iron, and followed. When Tassie caught up with the eagle it turned and faced him, standing over the lamb.

Harry, as he ran, could see blood staining the white wool of the lamb's body; the eagle's wings were half spread out over it, and moving slowly. The huge bird was grayish-brown with a white head and tail. The beak was yellow, and the legs yellow and scaly.

It lowered its head, and with a fierce movement threatened Tassie; then, as the dog approached, it began to rock and stamp from foot to foot in a menacing dance; then it opened its beak and gave its fierce, yelping cry. Tassie hung back, his ears flattened against his head, snarling, creeping by inches towards the eagle; he was frightened, but he was brave. Then he ran in to attack.

The eagle left the lamb. With a lunging spring it aimed heavily at Tassie. It just cleared the ground and beat about Tassie with its wings, hovering over him. Tassie flattened out his body to the earth and turned his head upwards with snapping jaws. But the eagle was over him and on him, its talons plunged into his side, and a piercing scream rang out. The eagle struck deliberately at the dog's skull three times; the beak's point hammered on his head, striking downwards and sideways. Tassie lay limp on the ground, and, where his head had been, a red mixture of blood and brains flowed on the grass. When Harry took his eyes away from the blood, the eagle was standing on the lamb again.

Harry approached the eagle slowly, step by step. He gripped his stick firmly as he came. The eagle put its head down. It rocked on its feet as if preparing to leap. Behind the terrific beak, sharp as metal, was a shallow head, flat and broad as a snake's, glaring with light yellow un-animal eyes. The head and neck made weaving movements towards him.

At a pace or two from the eagle Harry stood still. In a second he would make a rush. He could break the eagle's skull, he told himself, with one good blow; then he could avenge Tassie and stand up to his father.

But he waited too long. The eagle tried to rise, and with its heavy sweeping beats was beginning to gain speed along the ground. Harry ran, stumbling over the uneven ground, among boulders and out-croppings of rock, trying to strike at the eagle as he went. But as soon as the eagle was in the air it was no longer heavy and clumsy. There was a sudden rush of wings and buffeting about his head as the eagle turned to drive him off. For a second he saw the talons sharp as metal, backed by the metal strength of the legs, striking at his face. He put up his arm. At once it was seared with a red-hot pain, and he could see the blood rush out.

He stepped back, and back again. The eagle, after this one fierce swoop at him, went round in a wide, low circle, and returned to the lamb. Harry saw that his coat sleeve was in ribbons, and that blood was running off the end of his fingers and falling to the ground.

He stood panting; the wind blew across the empty high ground. The sheep had vanished from sight. Tassie lay dead near by, and he was utterly alone on the hills. There was nobody to watch what he did. The eagle might hurt him, but it could not jeer at him. He attacked it again, but already the eagle with its heavy wingbeats had cleared the ground; this time it took the lamb with it. Harry saw that it meant to fly, as it had flown yesterday, to an edge; and then out into the free air over the chasm, and over the valley far below.

Harry gave chase, stumbling over the broken ground and between the boulders—striking at the eagle as he went, trying to beat it down before it could escape. The eagle was hampered by his attack; and suddenly it swooped onto a projection of rock and turned again to drive him off. Harry was now in a bad position.

The eagle stood on a rock at the height of his own shoulders, with the lamb beside it. It struck at his chest with its talons, beating its wings as it did so. Harry felt clothes and flesh being torn; buffeting blows began about his head; but he kept close to the eagle and struck at it again. He did not want simply to frighten it away, but to kill it. The eagle fought at first simply to drive Harry off; then, as he continued to attack, it became ferocious.

Harry saw his only chance was to keep close to the eagle and beat it down; but already it was at the height of his face. It struck at him from above, driving its steel claws at him, beating its wings about him. He was dazed by the buffeting which went on and on all round him; then with an agonizing stab he felt the claws seize and pierce his shoulder and neck. He struck upwards desperately and blindly. As the eagle drove its beak at his head, his stick just turned the blow aside. The beak struck a glancing blow off the stick, and tore away his eyebrow.

Harry found that something was blinding him, and he felt a new sickening fear that already one of his eyes was gone. The outspread beating wings and weight of the eagle dragged him about, and he nearly lost his footing. He had forgotten, now, that he was proving anything to his father; he was fighting for his eyes. Three times he fended off the hammer stroke of the beak, and at these close quarters the blows of his club found their mark. He caught the eagle's head each time, and the bird was half stunned.

Harry, reeling and staggering, felt the grip of the claws gradually loosen, and almost unbelievably the body of his enemy sagged, half fluttering to the ground. With a sudden spurt of new strength, Harry attacked, and rained blows on the bird's skull. The eagle struggled, and he followed, beating it down among the rocks. At last the eagle's movements stopped. He saw its skull was broken, and that it lay dead.

He stood for many minutes panting and unmoving, filled with a tremendous excitement; then he sat on a boulder. The fight had taken him near a steep edge a long way from the body of Tassie.

His wounds began to ache and burn. The sky and the horizon spun round him, but he forced himself to be firm and collected. After a while he stooped down and hoisted the eagle onto his shoulder. The wings dropped loosely down in front and behind. He set off towards the farm.

IV

When he reached his home, the low gray walls, the ploughed fields, and the green pasture fields were swimming before his eyes in a dizzy pattern. It was still the early part of the morning, but there was plenty of life in the farmyard, as usual. Some cows were being driven out. One of the carthorses was standing harnessed to a heavy wagon. Harry's father was talking to the carter and looking at the horse's leg.

When they saw Harry come towards them they waited, unmoving. They could hardly see at first who or what it was. Harry came up and dropped the bird at his father's feet. His coat was gone. His shirt hung in bloodstained rags about him; one arm was caked in blood; his right eyebrow hung in a loose flap, with the blood still oozing stickily down his cheek.

"Good God!" said Thorburn, catching him by the arm as he reeled.

He led the boy into the kitchen. There they gave him a glass of brandy and sponged him with warm water. There was a deep long wound in his left forearm. His chest was crisscrossed with cuts. The flesh was torn away from his neck where the talons had sunk in.

Presently the doctor came. Harry's wounds began to hurt like fire, but he talked excitedly. He was happier than he had ever been in his life. Everybody on the farm came in to see him and to see the eagle's body.

All day his father hung about him, looking into the kitchen every half hour. He said very little, but asked Harry several times how he felt. "Are you aw reet?" he kept saying. Once he took a cup of tea from his wife and carried it across the kitchen in order to give it to Harry with his own hands.

Later in the day old Michael came back, and Harry told him the whole story. Michael turned the bird over. He said it was an erne, a white-tailed sea eagle from the coast. He measured the wing span, and it was seven and a half feet. Michael had seen two or three when he was a boy—always near the coast—but this one, he said, was easily the largest.

Three days later Mr. Thornburn took Harry, still stiff and bandaged, down to the village inn. There he set him before a blazing fire all the evening, and in the presence of men from every cottage and farm Thorburn praised his son. He bought him a glass of beer and made Harry tell the story of his fight to everyone.

As he told it, Thorburn sat by him, hearing the story himself each time, making certain that Harry missed nothing about his struggle. Afterwards every man drank Harry's health, and clapped Thorburn on the back and told him he ought to be proud of his son.

Later, in the silent darkness, they walked back to the farm again, and neither of them could find anything to say. Harry wondered if his father might not refer to the beating and apologize. Thorburn moved round the house, raking out fires and locking up. Then he picked up the lamp and, holding it above his head, led the way upstairs.

"Good night, Harry," said his father at last, as he took him to his bedroom door. "Are you aw reet?"

His father held the lamp up and looked into Harry's face. As the lamplight fell on it, he nodded. He said nothing more.

"Aye," said Harry, as he turned into his bedroom door, "I'm aw reet."

Discussion

1. What universal human situation does the story present?
2. Does the characterization of the father make his lack of understanding of the boy seem plausible? Why?
3. Exactly what effect does the boy's victory over the erne have on the father?
4. What does the final line of the story reveal about Harry, and why is it a satisfactory conclusion?
5. Compare the diction of the story with that of Stephen Crane's "A Dark-Brown Dog," pp. 551–557. What does the difference in diction reveal about the different purposes of the two authors?
6. Can you show that Crane is rather openly critical of the situation he presents, while any criticism in Beachcroft's story is implicit and undeclared?

Index

The Index is intended to make the selections and editorial apparatus of the book readily accessible for a variety of teaching and learning purposes. The Index lists

1) authors and selections,
2) types of compositions represented by whole selections and significant parts of selections,
3) kinds of subject matter to be found in the selections,
4) the topics touched on in the questions accompanying selections.

The topics in 4) include rhetorical principles and devices, punctuation, diction, sentence structure, paragraphing, and the organization of the whole composition. Page references to questions accompanying a selection are followed by *q;* such references are considered a sufficient guide to the type of composition represented by the selections themselves. A *q* following a title indicates that the selection is accompanied by questions which refer to the technique of writing the type of composition represented. The items listed under a heading are sometimes exhaustive of the subject; when exhaustiveness serves no purpose, they refer to the best examples of the thing indexed.

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